

**ENHANCING COMMUNITY BASED ORGANIZATIONS INITIATIVES
ENGAGED IN SOLID WASTE MANAGEMENT IN MAKING COMPOST
SCHEME IN MOROGORO MUNICIPAL IN TANZANIA**

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OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
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CERTIFICATION

The undersigned certifies that he has read and here by recommend for acceptance by the Open University of Tanzania dissertation titled “*Enhancing Community Based Organization Initiatives Engaged in Solid Waste Management in Making Compost Manure in Morogoro Municipal in Tanzania*” in partial fulfilment of the requirements for the Degree of Master in Community Economic Development (MCED) of the Open University of Tanzania.

.....

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.....

Date

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DECLARATION

I, Ramadhani Mrisho Mgawe, hereby declare that this dissertation is my own original work and that it has not been submitted and will not be presented to any other university for similar of any degree award.

.....

Signature

.....

Date

DEDICATION

As a graduant, I sincerely express my gratitude to my family members, my Mam Hoka Bundalla, elder mam Masele Mdaki , my Wife Elizabeth Mgawe who has been busy in nursing me with balanced diet which made me work harder in conducting this dissertation. Lastly but not least may I dedicate my children Nyamizi Mgawe, Nfumbo Mgawe, Shitolele Mgawe, Muzya Mgawe and Mayala Mgawe for their tolerance to financial crisis met when I was conducting this research Almighty Allah bless them.

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ABSTRACT

This study focuses on Enhancing community based organizations initiatives engaged in solid waste management in Morogoro Municipal council. The accumulation of solid waste in urban area being collected and disposed have been a major problem to hygiene mechanism to residents causing an increase of communicable diseases such as Cholera, diarrheal diseases, pungent smell, malaria, dysentery, land water and food contamination .Limited funds from local government to support the CBOs of solid waste management services lack of adequate protective gears and trucks/ vehicles to ferry the solid waste to the main landfill in time are the major contributing factors of this problem .The CNA prioritization of needs came with an intervention of minimizing the amount of solid waste by deciding to start compost manure schemes within the CBOs engaged with collection of the solid waste in the municipal area .It was a project to be conducted in three years. The project began with few(2 to3 CBOS) among 30 CBOS in order to enable implementation, monitoring and evaluation of the project to be easily achieved according to the intended main goal of initiating compost manure schemes..The project came up with a number of recommendations. Mainly it is recommended that Morogoro Municipal Authority assist in the formulation and enforcement of by laws and regulations on solid waste and enhance CBO's to undertake their roles and responsibilities in solid waste management in compost manure production.

EXECUTIVE SUMMARY

Solid Waste Management (SWM) has of recent attracted many actors. It has now shifted from being the responsibility of the Local Government Authorities to being the responsibility of the whole community at large. This Project looks into Solid Waste Management, in particular the role and responsibility of the CBO's of solid waste collection beneficiaries in making compost manure from solid waste.

This Project was carried out within Mjimkuu Ward of Morogoro Municipality in Morogoro in Tanzania. The Participatory Assessment (PA) conducted revealed that there was a problem of awareness on solid waste management, initiatives in composting issues by the solid waste service beneficiaries.

The research methods used to identify the problem included surveys and direct observations, using structured questionnaires as the main research tools. The Project intended to change the situation to the better. The other expectation was on the part of the service beneficiaries. That the beneficiaries understand and undertake their role and responsibility of composting Solid Waste materials.

The Project has managed to form the NGO/CBO in the name of **“Umoja wa vikundi vya wazoa taka Morogoro (UVIWATAMO)”**, which has a legal registration number MG/MMC/CBO/000410 of September, 2014. The project has also managed to produce compost manure by KIUM groups the service beneficiaries to perform their community role and responsibility of applying solid waste materials to produce compost manure which is used to enrich the soil nutrients for plants to grow.

The project is continuously being monitored and evaluated by the project Stakeholders on its achievements and battlements, for the purpose of making reviews where necessary. The Monitoring Research Method used was Beneficiary Assessment (BA) method. The (BA) method involved a systematic consultation with the project beneficiaries and project stakeholders for the purpose of obtaining their views on the planned or on-going project activities. The Participatory Monitoring (PM) went on well with minor adjustments as a result of good relations among the project stakeholders.

The Project Evaluation was participatory (PF). Both formative (FE) and summative (SE) evaluation were carried out. The research methods used in the evaluation process included direct observations, unstructured interviews and pre-tested questionnaires. The Project can be said to have managed to achieve its goal.

It is recommended that the Morogoro Municipal Council authorities assist the CBO's and others by instituting and enforcing necessary by-laws and regulations and involving the private sector in solid waste composting. This will assist in employment creation and income generation thus improving the livelihoods of the people of Morogoro Municipality. At the National level there must be a single policy on SWM covering the issues of the community being enforced to initiate the solid waste composting thus promoting the country's Development Vision 2025.

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LIST OF ABBREVIATIONS

BPR	Business Process Reengineering
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CBOs	Community Based Organizations
CED	Community Economic Development
CSO	Civil Society Organization
FBOs	Faith Based Organization
FGD	Focus Group Discussion
FE	Formative Evaluation
FEDO	Finance and Economic Development Office
KPI	Key Performance Indicator
GoT	Government of Tanzania
GPS	Global Positioning System
HH	Household
LFA	Logical Framework Analysis
LGA	Local Government Authority
LGRP	Local Government Reform Program
LLG	Lower Local Government
MD	Municipal Director
MMC	Morogoro Municipal Council
MoH	Ministry of Health
MSSE	Micro and Small Scale Enterprise
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
M&E	Monitoring and Evaluation
M o U	Memorandum of Understanding
NGOs	Non Governmental Organizations
PA	Participatory Assessment

PCNA	Participatory Community Needs Assessment
PCPP	Participatory Community's Policy Project
PE	Participatory Evaluation
PM	Participatory Monitoring
PME	Participatory Monitoring and Evaluation
PPP	Public Private Partnership
PTM	Participatory Training Manual
SE	Summative Evaluation
SMART	Specific, Measurable, Achievable, Realistic and Time bound
SPSS	Statistical Package for Social Science
SUMO	Sustainable Morogoro (Program)
SWOT	Strength, Weaknesses, Opportunities, Threats
TOT	Training of trainers
TUCPS	Tanzania Urban Crime Prevention Strategy
UVIWAMAMO	Umoja wa Vikundi vya Watunza Mazingira Morogoro
UVIWATAMO	Umoja wa Vikundi vya Wazoa Taka Morogoro
UN.	United Nations
UN-HABITAT	United Nations Human Settlement Program
UNDP	United Nations Development Program
UNIFEM	United Nations Development Fund for Women
UK	United Kingdom
UNCHS	United Nations Center for Human Settlement
UNEP	United Nations Environmental Program
URT	United Republic of Tanzania
US	United States

WB	World Bank
WDC	Ward Development Committee
WEO	Ward Executive Officer
WHO	World Health Organization
WP	Work Process
HO	Health Officer
KIUM	Kikundi cha Usafi wa Mazingira Mji mkuu
LGA	Local Government Authority
MEO	Mitaa Executive officers (MEOs)
MMC	Morogoro Municipal Council
SCTZ	Swiss Contact Tanzania
SWM	Solid Waste Management
TnM	Taka-ni-Mali

CHAPTER ONE

1.0 PARTICIPATORY NEEDS ASSESSMENT

1.1 Introduction

This chapter attempts to provide the general background of the participatory needs assessment. It begins with the background information, then it provides the community profile where the general and specific ward profile is introduced. The objective of the assessment and research questions are also part in this chapter followed by the significance of the study and the research methodology. It describes the report of community Needs Assessment (CNA) that will take place in Morogoro Division with UVIWATAMO (*Umoja wa vikundi vya wazoa taka Morogoro*), Morogoro Municipality.

The community needs assessment was conducted by using a participatory approach to make sure that, the project is implemented owned and sustained by the community. Participatory needs assessment (PNA) was a collaborative approach that promoted critical thinking of the community to be assessed in order to identify its real needs.

Participatory needs assessment involved people in collecting information and undertaking analysis on the needs of their own community to establish areas of priority and the best way of designing and delivering programmes to meet the identified needs (Ross A. and Jaffa S. 2006). Needs Assessment is the participatory planning process since the process identifies community goals. In this process the facilitator found out what the community already knew by using needs assessment

tools (UNESCO, 2001). These were in form of interviews, registration forms, analysis of statistics and records, suggestion boxes, informal conversations, needs assessment forms, observation, meetings, reports, newsletters and questionnaires. According to Galbraith, (1991) and UNESCO (2001) during the planning stage, facilitators, should consider among other things, the background, interests, knowledge, attitudes, skills and inductions of the communities like and those of their immediate and extended families. According the Galbraith, (1991) a needs assessment should identify the gaps between the communities as perceived by the communities and others. Moreover the assessment assisted the facilitator to make wise decisions about the circulars that are suitable for the community.

The principle behind participatory needs assessment is that programmes and projects designed, implemented, monitored and evaluated by the community was better targeted. In addition, participatory needs assessment is an important component of gender-based analysis, providing an opportunity for women and men to discuss and analyze their needs, interests and barriers preventing them from being met (Moser C.O.N, 1989).

The distinction and importance of participatory needs assessment is that, it helps to build capacity of the community by developing knowledge and skills on tackling their identified needs to improve their quality of life. It improves the relevance of the study and the interventions to be implemented. Furthermore, PNA would increase the probability of getting real needs from the community through identifying potentials, constraints as well as opportunities. Lastly, but not least PNA leads to development

of appropriate solutions, ownership and sustainability in different areas particularly in poverty reduction area (Macaulay A.C., Gibson N. and Freeman W. 2003).

1.2 Community Profile

1.2.1 General Profile

This study was conducted in Morogoro Urban Division within Morogoro Municipality which is one of the oldest towns in the history of Tanzania (by then Tanganyika) in the 18th century. Morogoro Municipality is the Regional Headquarters of Morogoro. It was established under the Local Government (Urban Authorities) Act No. 8 of 1982. Morogoro Urban Division is situated about 195 west of Dar es Salaam. The town spreads under the slopes of the Uluguru Mountains with the size of 260 sq. km. and they are 29 wards which in total have 272 streets (mitaa).

1.2.2 Morogoro Urban Division Profile

Morogoro urban division is one among the seven divisions of Morogoro district. Morogoro Urban is the fastest growing Town in Tanzania highly influenced by Rural – Urban migration and natural population growth. According to the sensor report of 2012, the population is 315 866 with population growth rate of 4.7%. The number of households stands at 54.000 with an average of 4.2 persons per household who dwell in 24.000 houses whereby the average number of people living in each house is 10. (MMC, 2012). Furthermore the geographically very attractive for business ventures as well as human settlements. These kind of social economic phenomena contribute to environmental challenges such as infrastructures, limited resources for waste management due to an increased population.

In Morogoro urban Division, the solid waste produced from home based services and business centres are not properly managed due to the large quantity of waste produced daily. Morogoro Municipal Council recognizes that the solid waste management situation in most urban wards is highly unsatisfactory and that radical improvements are needed. At present, waste collection in Morogoro Municipality is done jointly by community based organizations under C B Os Networking known as UVIWATAMO and or private companies in collaboration with MMC. CBOs collect waste from source (houses and business units) and cart it to collection centres where valuable items are sorted and the rest is bulked in skip buckets.

1.2.3 Social Economic activities and employment

Major activities include industry, transport, small-scale enterprises within production and trade, animal husbandry and poultry farming, commercial and subsistence farming, private services and public administration. Major industries include Morogoro Canvas Mills, Tanzania Packaging Manufacturers (1998) Ltd., Morogoro Steel Rolling Mills, Morogoro Canvas Mills, 21st Century Textile Mills, Morogoro Hides and Skins, Tanzania Tobacco Processing Company and Morogoro Plastics.

1.3 Community Needs Assessment

This part engaged on Enhancing Community Based Organizations Initiatives of *Umoja wa Vikundi vya Wazoa Taka Morogoro* (UVIWATAMO) solid waste management to explain the results of the process of participatory needs assessment that was undertaken by a researcher in identifying needs of CBOS dealing with solid waste management and the Community at large.

Needs assessment is generally conducted for two broad objectives, pre-project design base line assessment and for pre-project design highlights issues or factors within a community, organization or service delivery setting that may interfere with or facilitate a proposed development intervention, while baseline assessment it is used to establish preliminary information or data against which to measure changes.

Some of the benefits that community and Organizations can realize from conducting a needs assessment are to make the project defensible, fundable and measurable, targets resources, recognize existing efforts, helps garner media attention, determine whether old programmes can be scrapped and new ones begun or whether programmes are working well and should be deprecated.

The project was participatory in a sense that it aimed at enabling the community to identify their problems as well as look for solutions by using resources from their own locality. The Project involved the community during the planning, implementation and the participatory evaluation phase in order to bring the ownership and ensure the sustainability of the project.

Assessment helped a researcher and the community fully understand a problem, determine the nature and extent of the identified problem in a community and how the problem is perceived among diverse groups and ways to address it because it involves the targeted community in identifying the assets of a community and determining vital potentials. The CNA involved asking and discussing with the community about the services rendered, economic development and getting their opinions and ways in which can be employed to improve their lives. Thus, the

opinions offered from the community used to build the community and brought about changes (Sharma A., Lanum M. and Baltazar Y., 2000). In Enhancing UVIWATAMO Community Based Organizations Initiatives of solid waste management, the community needs assessment was conducted in July 2013 by a researcher in collaboration with Ward development officers, local government leader and UVIWATAMO members.

1.3.1 Objectives of the Assessment

1.3.1.1 General Objective of the Assessment

The overall objective of this study was to assess the role of Community Based Organizations Initiatives engaged in solid waste management in Morogoro municipality.

1.3.1.2 Specific Objectives of the Assessment

Specially, this Study Intends:

- (i) To examine demographic and social Economic information of the Community of the study area.
- (ii) To identify community based organizations engaged in collecting, sorting and recycling of solid waste
- (iii) To identify factors affecting the Community based organizations Initiatives of solid waste management.
- (iv) To determine the sustainability of Social Economic Initiatives of the Community Based Organizations engaged in solid waste management.

1.3.2 Research Questions

Based on the focus of the study the following research questions were formulated;

- (i) What is the status of Demographic and social Economic information of the Community of the study area?
- (ii) What are the social economic Initiatives of the Community Based Organizations engaged in solid waste management in the study area?
- (iii) What are factors that affecting the community based organizations initiatives of solid waste management?
- (iv) What is the sustainability of Social Economic Initiatives of the Community Based Organizations engaged in solid waste management?

1.3.3 Community Needs Assessment Methodology

This part of CNA methodology described the study design, sampling techniques, data collection methods and tools used. The study methodology also explained how the collected information was analyzed, the tools used to analyze the collected data and the presentation of the data.

1.3.4 Research Design

This was participatory and descriptive research that collected quantitative and qualitative information. Different techniques and tools were used to acquire needed information from primary source. The primary information were collected from the targeted community through various data collection tools. An open ended survey checklist was prepared and used to interview group members and workers. Separate

group discussions were done with workers and group leaders. Individual interviews were carried out with group leaders and Local Government Authority (LGA) officers, particularly with Ward Executive Officers (WEO) and Health officers. In addition, purposively and randomly designs were also used in the study as described below in sampling techniques section. The study employed three methods of quantitative and qualitative information respectively. Notably, the study was carried out once within four (4) days that included preparation stage, CNA, feedback, prioritization and planning for the intervention.

The assessment aimed at identifying a wide range of needs so that they can be sought and prioritized by the group, ready for solved them one after the other. Thus the act of involving Community Based Organization s of solid waste management from the identification of their needs, prioritization, ranking, drawing interventions and implementation built confidence among them and created a sense of ownership.

1.3.5 Sampling Techniques

1.3.5.1 Target Population

The study population for this research is UVIWATAMO community members and some government officials living in the area covered by the study; this is because UVIWATAMO as an NGO is made up of 23 CBOs members each representing one ward. Therefore in order to capture all information relevant for this study the researcher decided to target the household members, community local leaders, government officials, institutions, UVIWATAMO members (Target groups) as key actors and key informants.

1.3.5.2 Data Collection Methods and Tools

The methods used to collect information were survey, focus group discussion and observation. Guiding questions for focus group discussion was also one of the tools used. The questionnaire were pre-tested before the actual exercise and corrections were made accordingly.

1.3.6 Sample Size and Sampling Procedures

1.3.6.1 Sample Size

The study planed to cover 60 respondents, of which 23 respondents expected from leaders of CBOs who are members of UVIWATAMO, and 10 workers of CBOs. Other 24 respondents were from the key informants who were responsible in Urban solid waste management and general governance of the CBOs of SWM while 3 respondents were from the financial institution. In this case the researcher decided to use a cross-sectional design in getting the needed information from targeted population in assessing the role of CBOs of SWM.

1.3.6.2 Focus Group Discussion

In order to get qualitative information from the study area a focus group discussion method was used. A total of 30 people; 23 from CBOs of UVIWATAMO group, 4 local government leaders at Ward and Street levels, 1 development officer and 2 other head of department from Municipal were involved in focus group discussion. There was one moderator who was leading the discussion by using prepared guiding questions and another person for recording the insights from the participants as the discussion continued.

The discussion was live, exciting and challenging; it was involved a broad discussion, contribution, questioning and even giving some suggestions for the way forward. The climate setting was in a semi-cycle layout and all members were given chance one after the other to say something. In fact, some questions were the same as the ones used in the survey; however, here there were more discussions, openness and free comments. Also the discussion aimed at depicting some insights on the ownership and sustainability by asking the participants who they think was responsible for their development. The discussion was about 60 minutes respectively. Thereafter, community members were given chance to ask questions or given any comments on what were discussed.

1.3.6.3 Observation (Socio- Economic Activities Undertaken)

The intention was to observe the lives of the target group and gain a better understanding of their perspective, experience and stumbling blocks (problems), related to social economic activities undertaken with regard to the statistical reality and comparing the theoretical analysis with social groups. The observation was throughout the community needs assessment process.

1.3.6.4 Data Analysis Methods

Both qualitative and quantitative analysis were conducted whereby the qualitative method which were used to analyze the in depth interviews. Descriptive statistics such as frequencies and percentages were determined and the information collected were summarized, edited, coded, classified and analyzed using special statistical package for social sciences (SPSS) then imported to excel for tables.

1.4 Result, Discussion and Findings

1.4.1 Introduction

This part focused on research findings based on a study that was conducted in the Morogoro Municipality for the purpose of assessing the role of Community Based Organizations (CBOs) engaged in Solid Waste (SW) management in Morogoro Municipality. The chapter included four sections. Section one focused on the demographic information of 60 respondents who were involved in the study, section two on social economic activities assessment, section three on community based organizations initiatives and management, section four on community based organization sustainability.

1.4.2 Respondents' Demographic Information and Situational Characteristics

1.4.2.1 Respondents' Demographic Information

In this study, respondents demographic information included four factors namely gender, age, marital status and education level as displayed in Table 1. The study about these four factors is important since they are proxies for the managerial skills which usually influence people in making decisions regarding their lives. In this study, 60 respondents were involved 15 CBO workers, 24 municipal leaders and 21 CBO leaders. In overall, results in Table 1 show that the Variation in sex and marital status among the three groups involved in the study is not significant while the variation in age and education is significant. Results in Table 1 and 2 show relatively a high proportion (53%) of the CBO workers are in the age group below 25 years while a high proportion (59%) of municipal leaders are in the age group between 36 and 65 and a high proportion of (53%) CBO leaders are in the age groups from 18 to 35.

Table 1: Respondents' Demographic Information (Continued)

Sex	CBO workers		Municipal leaders		CBO leaders		Total	
	N	%	N	%	N	%	N	%
Female	8	53	13	54	13	62	34	57
Male	7	47	11	46	8	38	26	43
Total	15	100	24	100	21	100	60	100
Chi-square=0.36, P=0.834								
Age								
Below 18	5	33	0	0	0	0	5	8
18 - 25	3	20	3	13	2	10	8	13
26 - 35	3	20	7	29	9	43	19	32
36 - 45	3	20	9	38	10	48	22	37
46 - 55	0	0	3	13	0	0	3	5
56 - 65	1	7	2	8	0	0	3	5
Total	15	100	24	100	21	100	60	100
Chi-square=25.26, P=0.005								

Source: Field Data (2014)

Table 2: Respondents' Demographic Information

Marital Status	CBO workers		Municipal leaders		CBO leaders		Total	
	N	%	N	%	N	%	N	%
Single	5	33	6	25	7	33	18	30
Married	9	60	18	75	13	62	40	66
Divorced	1	7	0	0	0	0	1	2
Separated	0	0	0	0	1	5	1	2
Total	15	100	24	100	21	100	60	100
Chi-square=5.61, P=0.468								
Education								
Primary Education	6	40	3	13	5	24	14	23
Secondary	8	53	7	29	10	48	25	42
Post secondary	0	0	8	33	4	18	12	20
Diploma	1	7	4	17	2	10	7	12
Degree	0	0	2	8	0	0	2	3
Total	15	100	24	100	21	100	60	100
Chi-square=13.63, P=0.050								

Source: Field Data (2014)

In view about education, results in Table 1 show high proportion CBO workers (93%) and CBO leaders (72%) being primary and secondary school leavers while. On other hand, relatively a high proportion of municipal leaders have attained post secondary education. The results imply that SW management serve as an employment opportunity for primary and secondary school leavers.

1.4.2.2 Situational Characteristics

In this study situational characteristics included respondent household family size, sources of income and background information in relation to solid waste management. In general, results in Table 2 show number of household members being evenly distributed between two to more than five. With regards to main sources of income, results in Table 3 show a significant variation in employment among the three groups involved in the study.

While a high proportion of CBO workers are engaged in small business and fishing, a high proportion of municipal leaders and CBO leaders are wage salary earners. Table 3 Show solid waste practices in the Morogoro municipality in terms of quantity of SW collected in Kgs in a day, number of households or units served and the amount of fees collected per household.

In overall, results in table 3 show that, 75% of the respondents reported that they collect more than 500 kgs of SW in a day in more than 100 houses. Results in table 4 further show household contribution ranging from T Shs 500 to T Shs 6,000 with an average contribution of T Shs 3000 per household.

Table 3: Respondent Family Size and Main Sources of Income

Family Size	CBO workers		Municipal leaders		CBO leaders		Overall	
	N	%	N	%	N	%	N	%
One member	0	0	1	4	1	5	2	3
Three	4	27	4	17	3	14	11	18
Five	4	27	8	33	4	19	16	27
Two	2	13	2	8	1	5	5	9
Four	3	20	5	21	3	14	11	18
More than five	2	13	4	17	9	43	15	25
Total	15	100	24	100	21	100	60	100
Chi-square=7.55, P=0.672								
Source of Income								
Farming	7	47	5	21	2	10	14	23
Fishing	0	0	1	4	0	0	1	2
Small business	8	53	0	0	2	10	8	13
Wage salary	0	0	15	63	16	75	33	55
Farming & Petty business	0	0	3	13	1	5	4	7
Total	15	100	24	100	21	100	60	100
Chi-square=27.24, P=0.001								

Source: Field Data (2014)

1.4.2.3 Social Economic Initiatives of Community Based Organization Engaged in SW Management

This section focused on social economic activities of the community based organizations engaged in solid waste management and the main sources of solid waste. In overall, results in Table 5 show that, the variation in economic activities in which CBO workers, Municipal leaders and CBO leaders is not statistically significant. In the case of economic activities in which the three groups are engaged in, results in Table 4 show that the majority of the three groups are engaged in retail and wholesale trade. Such results show 67% of the CBO workers, 67% of Municipal leaders and 52% of the CBO leaders engaged in retail and wholesale trade. As far as

main source of solid waste in concerned, results further show majority of the groups reporting residential houses as main sources of solid waste.

Table 4: Quantity of SW Collected, Number of Houses Served and Amount of Contribution

Quantity of SW Collected Per Day	Frequency	Percent
Less than 500 kgms	15	25
One ton	11	18
Two tons	9	15
Three tons	9	15
More than 5 tons	16	27
Total	60	100
Number of houses served		
Below 100	29	48
100 - 200	3	5
201 - 300	6	10
301 - 500	17	29
Beyond 500	5	8
Total	60	100
Amount of contribution (T Shs)		
500	1	2
1500	1	2
2000	16	27
3000	33	54
3500	1	2
4000	5	8
6000	3	5
Total	60	100

Source: Field Data (2014)

Table 5: Economic Initiatives of CBOs Engaged in SW Management and SW Sources

Economic Activities	CBO workers		Municipal leaders		CBO leaders		N	Total
	N	%	N	%	N	%		
Agriculture	3	20	3	13	4	19	10	16
Livestock	2	13	0	0	1	5	3	5
Industrial activities	0	0	1	4	3	14	4	7
Retail/wholesale trade	10	67	16	67	11	52	37	62
Hotels, bars and G/houses	0	0	4	16	2	10	6	10
Total	15	100	24	100	21	100	60	100
Chi-square=9.55, P=0.372 *Not Significant*								
Sources of Solid Waste								
Residential houses	15	100	20		21	100	56	94
Offices and business	0	0	2		0	0	2	3
Hotels, bars, guest houses	0	0	2		0	0	2	3
Total	15	100	24		21	100	60	100
Chi-square=10.55, P=0.482 *Not Significant*								

Source: Field Data (2014)

1.4.2.4 Community Based Organizations Initiatives and Management

This section focused on factors that affect the community based organizations initiatives on solid waste management. In overall, results in Table 6 show the distribution of 60 respondents selected from a total of 30 CBO groups. The highest number of respondents comes from Faru, where 6 respondents were selected from the group. Results in Table 5 further show Tushikamane and Twikinde each provided 5 respondents followed by Kiwanja Ndege and Juhudi where each provided 4 respondents.

Table 6: Community Based Organization Groups Engaged in SW Management

Group Number	Group name	Number of Respondents	Percent
1	Tuelewane	1	1.7
2	Juhudi	4	6.7
3	BIRAS	1	1.7
4	Misufini Mafiga	2	3.3
5	Kiwanja Ndege	4	6.7
6	CHAWAKU GENDER	1	1.7
7	Kihonda Muungano	1	1.7
8	Motomoto	1	1.7
9	Kidimbwa	2	3.3
10	Musaje	1	1.7
11	Msamvu stand	1	1.7
12	MCDO	1	1.7
13	UWAMAMO	2	3.3
14	MMC	3	5
15	FARU	6	10
16	Mtaa Secretary Committee	1	1.7
17	Kium	3	5
18	Policing	2	3.3
19	Twikinde	5	8.3
20	Ujenzi	1	1.7
21	Ukwele	2	3.3
22	Twende Pamoja	1	1.7
23	Soko Kuu	1	1.7
24	Mbega	1	1.7
25	Umoja	1	1.7
26	Serikali ya Mtaa	1	1.7
27	Nguvu kazi	1	1.7
28	Morogoro fishing	1	1.7
29	BILAS Federation	3	5
30	Tushikamane	5	8.4
Total		60	100

Source: Field Survey (2013)

Table 6 shows only 23% of the surveyed CBO groups which were registered while 77% of the groups were not registered. It means that something should be done for all groups of SWM to be registered.

1.4.2.5 Groups Registration

Table 7: If Community Based Organization Group if Registered

Response	Frequency	Percent
Yes	14	23
No	46	77
Total	60	100

Source: Field Survey (2013)

1.4.2.6 Major Activities of Community Based Organization Groups

The major activities of the community based organization engaged in solid waste management are shown in Table 7. Collection of solid waste (58%) takes the highest proportion followed by sorting (24%), grass cutting in open space (6%) and fees collection (4%) and a combination of roads and open space cleaning (3%). Other includes environment cleaning, provision of community education on solid waste management, and solid waste management in general.

Table 8: Major Activities of Community Based Organization Groups

Major Activities	Frequency	Percent
Environment conservation	1	1
Fees collection	2	4
Grass cutting in open spaces	3	6
Provide community education on SW	1	1
Roads/open space cleaning	2	4
Sorting	14	24
Solid waste collection	36	59
SW management	1	1
Total	60	100

Source: Field Survey (2013)

1.4.2.7 Provision of Protective Gears to CBO Groups

Table 8 shows CBO groups response about whether there are adequate protective gears against hazards that they get from solid waste management. Results in Table 8 show statistical significant variation in the response among CBO workers, municipal leaders and CBO leaders (Chi-square=10.63, P=0.031). While relatively a high proportion (87%) of CBO workers reported they do not have enough protective gears, a high proportion of municipal leaders said there are enough protective gears.

Table 9: Provision of Protective Gears to CBO Groups

Response	CBO workers		Municipal Leaders		CBO Leaders		Over all	
	N	%	N	%	N	%	N	%
Uncertain	1	7	2	8	5	24	8	13
Yes	1	7	16	67	8	38	25	42
No	13	86	6	25	8	38	27	45
Total	15	100	24	100	21	100	60	100
Chi-square=10.63, P=0.031								

Source: Field Survey (2013)

1.4.2.8 Membership of CBO Groups to UVIWATAMO

This sub-section focused about membership of CBO groups to UVIWATAMO. Results in Table 9 show relatively a small majority (53%) of CBO groups being members of UVIWATAMO, may be because of inadequate leadership and financial management by UVIWATAMO. On the other hand, some efforts need to be put in order to encourage the groups to join the organization which play important roles. The roles played by UVIWATAMO include organization and unification of CBO

members. Other important roles UVIWATAMO plays include defending CBOs against their right, provision of education about SW management and SW collection and CBO supervision.

Table 10: Membership of CBO Groups to UVIWATAMO

If respondent solid waste group is member of UVIWATAMO	Frequency	Percent
Yes	32	53
No	28	47
Total	60	100
The role that UVIWATAMO plays		
Organize CBO members	17	28
SW collection	4	7
Provide education on SW	2	3
SW collection & CBOs supervision	10	17
Unification of CBOs	17	28
Help CBOs to secure their rights	10	17
Total	60	100
If UVIWATAMO leaders have adequate leadership and financial management		
Response		
Yes	18	30
No	42	70
Total	60	100

Source: Field Survey (2013)

According to MMC (2013) about 47 CBOs were established by Danida Project – Sustainable Morogoro SUMO in between year 2000 and 2005s. Most of the CBOs are informal / not registered. Out of 47 CBOs only four are formally registered as NGOs (registered under Societies and NGO acts). All others are unregistered groups famously known as ‘Vikundi kazi’ (work groups). There is also no formal umbrella organization of CBOs at municipal / regional level, but there are initiatives to form a network of CBOs with proposed name of Umoja wa Vikundi vya Wazoa Taka Morogoro (UVIWATAMO). Only two CBOs, BIRAS and UWAMAMO namely,

who consider themselves better organized, are not members of this envisaged umbrella organization. Organizational charts are not correctly set, similarly the roles of different capacities and individual members (Figure 1). UVIWATAMO can be a good network to address general CBO issues including harmonization of fees, information sharing, lobbying and advocacy.

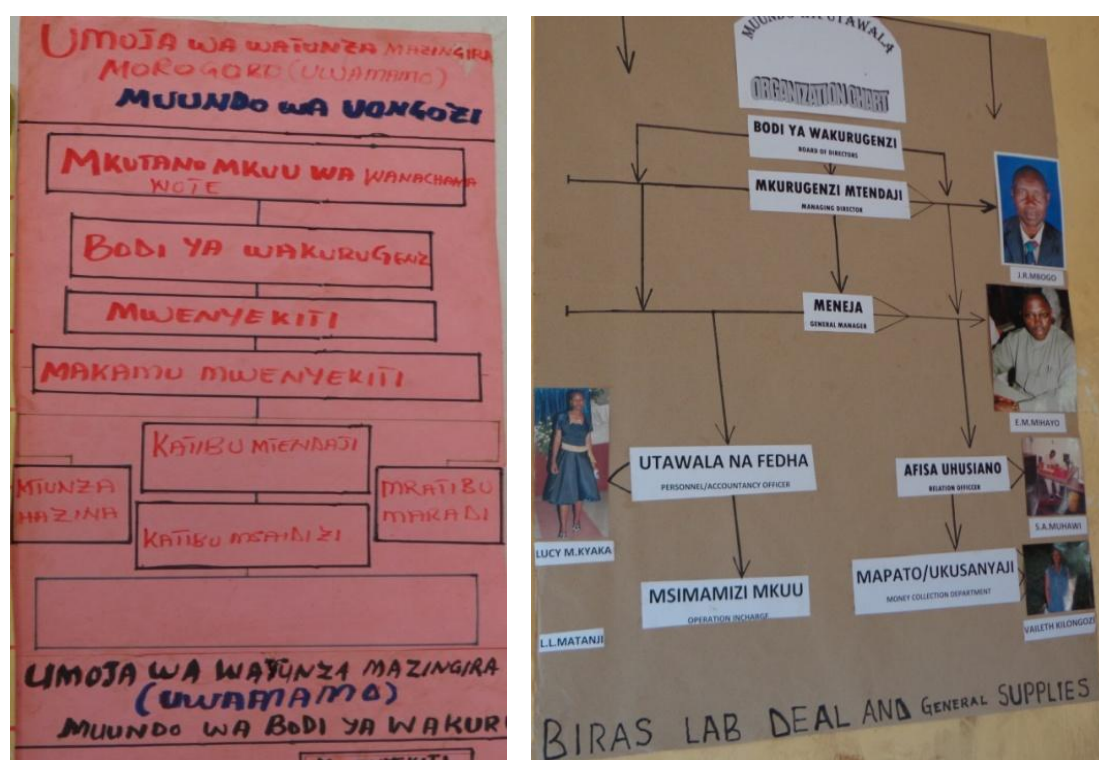


Figure 1 : Organizational structures of CBOs - UWAMAMO and BIRAS

Source: Field Survey (2013)

1.4.2.9 Benefit Gained from Forming UVIWATAMO Groups

Table 11 shows benefit obtained from forming UVIWATAMO groups in the community. Results in Table 10 show the benefits that CBOs can get through UVIWATAMO supervision include building capacity among SW staff, keeping the

environment clean, unification of CBOS, creation of environment and provision of solutions to CBOs problems.

Table 11: Benefit Gained from Forming UVIWATAMO Groups

Benefit Obtained from Forming UVIWATAMO Groups	Frequency	Percent
Keep environment clean	12	20
Build capacity on SW staff	15	25
Solve CBOs problems	6	10
Get education on conservation and employment	6	10
Creation of employment	9	15
Unification of CBOs	12	20
Total	60	100

Source: Field Survey (2013)

1.4.2.10 Training on Solid Waste Management

Training aspect was another aspect that this study tried to investigate. Results in Table 11 show relatively a small proportion (32%) of CBO groups that have attended training on solid waste management the rest (68%) have not attended such training.

Table 12: Training on Solid Waste Management

If ever attended training	Frequency	Percent
Not Aware	18	30
Yes	19	32
No	23	38
Total	60	100
Content of the training		
Not Applicable	41	68
Composite manure production	3	5
Leadership, Financing, C/manure	2	4
SW management + Recycling of SW	3	5
Education about value of SW	3	5
SW collection management	2	4
SW management, Community educ.	3	5
Capacity building	2	4
Total	60	100

Source: Field Survey (2013)

For the few CBO group's members who attended training, the course contents that were delivered include composite manure production, leadership and financing, solid waste management and re-cycling, education about the value of solid waste, community education about solid waste management, and capacity building.

1.4.2.11 The Way in which Municipal Council, Government and Financial

Institutions Support CBOs and NGOs engaged in SW Management

This section deliberates in the way Municipal council, Government and financial institutions support CBOs and NGOs engaged in solid waste management. In overall, results in Table 12 a small majority (57%) of the respondents reported that municipal council does not support CBOs and NGOs engaged in solid waste management.

Table 13: The Way in which Municipal Council, Government and Financial Institutions Support CBOs and NGOs engaged in SW Management

The Way the Council Support Groups Involved in SW	Frequency	Percent
Not Support	34	54
Provide working gears	7	12
Educate the community	1	2
Provide transport	14	24
Provide advice	2	4
Law enforcement	1	2
Reducing levy charges	1	2
Total	60	100
The way the Govt & Financial Inst. support groups involved in SW	Frequency	Percent
Not Support	55	90
Provide transport	1	2
Provide loans	1	2
Provide transport and training	3	6
Total	60	100

Source: Field Survey (2013)

For the small proportion (43%) which reported that the municipal council give support, mentioned provision of working gears, community education, transport and advice as the types of support given to CBOs and NGOs engaged in solid waste management.

In view about the government and financial institutions, results in Table 13 show only a small proportion (8%) of the respondents said that CBOs and NGOs get support from the former. The types of support mentioned include provision of transport, loans and training.

1.4.2.12 Opinions of CBO and NGO on Other Services

This sub-section deliberates on respondents' other opinions on other aspects related to community based organizations initiatives and management. Table 14 show aspects on which respondents gave positive and negative opinions.

Table 14: Opinions of CBO and NGO on Other Services

Statement	Uncertain		Yes		No		Overall	
	N	%	N	%	N	%	N	%
If payment arrangement legally binding	7	12	44	73	9	15	60	100
If Re-use is best way of treating SW	4	7	0	0	56	93	60	100
If Re-cycling is best way of treating SW	4	7	36	60	20	33	60	100
If composite prod. is best way of treating SW	4	7	32	53	24	40	60	100
If current transport of SW good	2	4	28	46	30	50	60	100
Is SW dumps adequate	0	0	35	58	25	42	60	100
If SW collection tools used are proper	0	0	18	30	42	70	60	100
If current SW collection arrangement proper	2	4	23	38	35	58	60	100
If current laws on SW collection adequate	4	7	41	68	15	25	60	100

Source: Field Survey (2013)

Results in Table 14 show that the respondents agree that payment arrangement on solid waste are legally binding, recycling and composite manure production are the best way of treating solid waste, solid waste dumping places are adequate and current laws on solid waste are adequate. On the other hand, the respondents gave negative responses on re-use as the best way of treating solid waste, the types of transport provided and solid waste collecting tools and the arrangement on solid waste collection arrangement.

1.4.2.13 Steps that should be Taken to Improve Financial Services in SW

Collection

Table 14 shows a list of steps that should be taken to improve financial services in solid waste collection.

Table 15: Steps that should be Taken to Improve Financial Services in SW

Step	Frequency	Percent
Fees should be paid on time	2	4
Working gears should be made available	4	8
There should be law enforcement	5	10
Make follow up on fees payment	3	5
Improve relation between SW stakeholders	9	16
Create awareness and relation among stakeholders	11	18
Improve partnership with financial institutions	12	20
The council should provide funds	3	5
Provide education to CBOs	1	2
SW collection should be on time	1	2
Govt and NGOs should support SW management	3	5
Vehicles should always be repaired	3	5
By-laws should be amended and operate	3	5
Total	60	100

Source: Field Survey (2013)

Among the list, improving partnership with financial institutions, creation of awareness and improving relation among solid waste stakeholders are the major steps that should be taken to improve financial services in solid waste collection. Other steps emphasize on law reinforcement, provision of working gears and follow up on fees payment.

1.4.2.14 Other Social Economic Activities Undertaken by UVIWATAMO

Other social economic activities undertaken by UVIWATAMO groups are shown in Table 15. Such activities include petty business, agriculture, defending CBO rights, community policing, environmental conservation, and supervision of community based activities, production of composite manure, educating community organizations and providing advice.

Table 16: Other Social Economic Activities Undertaken by UVIWATAMO

Activity	Frequency	Percent
Agriculture	15	25
Community policing	5	8
Composite manure production	3	5
Defend CBOs rights	6	10
Educate CBOs	1	2
Environmental conservation	5	8
Petty business	20	33
Provide advice	1	2
Supervise CBO activities	4	7
Total	60	100

Source Field Survey (2013)

1.4.2.15 Partnership Management of Social Services Based on SW Management

This section focuses on respondents' engagement on partnership management of social services pertaining to solid waste management. In overall, results in Table 16 show that the majority (55%) of the respondents have never attended partnership

management of social services pertaining to community based organizations engaged in solid waste management. In view about the 45% of the respondents who have attended partnership management of social services, results in Table 16 show 67% of the respondents have attended the partnership once.

Table 17: Partnership Management of Social Services Based on SW Management

If ever Attended Partnership Management of social services	Frequency	Percent
Yes	27	45
No	33	55
Total	60	100
Frequency of attending partnership management of social services based on SW		
Frequency	Frequency	Percent
Once	29	67
Twice	9	11
Thrice	10	7
Four times	12	15
Total	60	100
Level at which partnership management of social services based on SW was organized		
Level		
Council level	15	38
Mtaa level	8	7
Ward level	4	4
Swiss contact	8	7
Council and Ward level	8	7
Swiss contact and Council level	12	26
Council/Mtaa/Ward level	5	11
Total	60	100

Source: Field Survey (2013)

With regards to the level at which the partnership management of social services partnering community based organizations engaged in solid waste, results in table 17 further show a high proportion (26%) of the respondents mentioning a combination

of Swiss contact and council level being the level. In view about the organizer of the partnership, again a high proportion of the respondents reported the combination of the Swiss contact and the council as the organizer of the partnership.

Table 18: Partnership Management of Social Services Based on SW (continued)

The One who Organized Partnership Management of Social Services Based on SW		
Organizer	Frequency	Percent
Council level	14	22
Mtaa level	9	15
Swiss contact	10	19
Council and Ward level	3	4
Swiss contact and Ward level	3	4
Swiss contact and Council level	16	26
Council/Mtaa/Ward level	5	10
Total	60	100
Content of training in relation to SW management		
Content	Frequency	Percent
Education about value of SW	12	22
Re-cycling	5	7
Composite manure use	5	7
SW management	20	36
Use of SW	4	6
Composite manure production	7	11
SW treatment	7	11
Total	60	100

Source: Field Survey (2013)

Results in Table 18 further show management of solid waste and education about the value of solid waste to be the major course contents of the training at the partnership.

1.4.2.16 Community Based Organization Sustainability

The last section of this chapter focuses on community based sustainability. Issues about the future of solid waste, areas of preference in solid waste treatment, the role

of CBO and municipal council initiatives in solid waste management, what should be done by municipal council to improve CBOs engaged in SW management and challenges encountered by CBO and NGOs engaged in SW management.

1.4.2.17 The Future of Solid Waste Management

In overall, results in Table 19 show despite the fact that solid waste is being handled responsibly, the condition of the environment is still not good. The bad condition of the environment could result from limited sources of capital.

Table 19: The Future of Solid Waste Management

Condition of the environment	Frequency	Percent
Good	28	47
Bad	32	53
Total	60	100
If solid waste is being handled responsibly	Frequency	Percent
Uncertain	2	3
Yes	31	52
No	27	45
Total	60	100
If any future in solid waste collection	Frequency	Percent
Uncertain	4	7
Yes	45	75
No	11	18
Total	60	100
Sources of capital for business	Frequency	Percent
Individual	34	56
Loan	3	5
Grants	1	2
Individual and loan	22	37
Total	60	100

Source: Field Survey (2013)

Results in Table 17 show main source of capital in managing the business on SW is the individual. However, on the other hand, results from the study show that there is a future in solid waste management.

1.4.2.18 Areas of Preference in Solid Waste Treatment

This study tried to collect respondents' opinions about areas they preferred on solid waste treatment in case they are asked to initiate a project based on solid waste management. In general, results in Table 19 show that the most preferred area is composite manure production by 25% followed by 13% of the respondent who shown preference in sorting and the main given for the area preference is improvement in agricultural production.



Figure 2: Accumulated Waste at Mji Mpya Market Collection Point

Source Field survey (2013)

Residents around complain of foul smell and refuse to pay waste fee of 3000 per month.

Solid waste is not sorted at source. Most houses / households accumulate their waste in polythene bags and store them outside of the house or at road sides until the waste

is picked up by CBO workers' push cart and transported to collection centres. Most of CBOs do not operate a collection centres because residents around the area complain of foul smell (as with residence of Makaburi B street near Mji mpya Market Collection centre, figure) because the waste usually stays longer than necessary due to chronic transport challenges.

Waste sorting is done at collection centre by workers and/or members of CBOs. Only few items (e.g. glass, plastic bottles, metal and aluminium tins) which have a local market are sorted separately. Plastic bottles are the only items for which formal collectors and individual scavengers compete for as they have a readily available local market. Other items sorted include glass bottles, bones, charcoal, metal and aluminium tins and coconut shells (figure). Charcoal and other wood waste like coconut shells are commonly sorted and used by collectors to make fire and prepare meals at the collection points or their homes.



Figure 3 : Waste Items Sorted by CBO Members

Source Field survey (2013)

From top left clockwise is bones, charcoal, plastic bottles, metal and aluminium tins and cans, glass bottles and coconut shells.

There is basically no formal recycling practising CBO, only two CBOs: Twende Pamoja and KIUM have expertise in compost making but have stopped making due to lack of assured local market for compost manure. The fact that over three tons of compost made by Kikundi cha Usafi wa Mazingira Mji mkuu (KIUM) were stolen and that there was an order of 200,000 tons from abroad is evidence that compost is a marketable subject to bulky production to assured availability coupled with awareness raising and promotion of use by farmers (KIUM, 2013).

Table 20: Areas of Preference in Solid Waste Treatment

Area of preference if started business on SW	Frequency	Percent
Re-cycling	5	8
Sorting	13	22
Composite manure	25	42
Sorting and composite manure	12	20
Re-cycling and composite manure	2	3
Re-cycling, sorting and composite manure	3	5
Total	60	100
Reason for the preferring		
It is cheap	4	7
Increase of family income	2	3
Improve agriculture	22	36
It is a commercial activity	3	5
Make new products out of SW	1	2
Easy to manage	5	8
Create employment	13	22
Composite manure can be sold to farmers	4	7
Solid waste reduction	4	7
Reduction of transport cost for SW	2	3
Total	60	100

Source: Field Survey (2013)

1.4.2.19 The Roles of CBO and Municipal Council Initiatives in Solid Waste

Management

In view about the role of CBO initiatives in solid waste management, results in Table 20 show solid waste collection as the major role followed by environment cleaning and sorting. Other roles include educating the community about solid waste management, organize composite manure production, making follow up on fees collection, and organize solid waste removal from household.

Table 21: The Roles of CBO Initiatives in Solid Waste Management

CBO Roles	Frequency	Percent
Collect SW	24	38
Collect working tools from municipal	1	2
Educate the community on SW management	6	9
Environment cleaning	7	12
Estimate different fees for different sources	1	2
Make follow up on fees collection	3	5
Organize composite manure production	5	10
Organize SW removal at household	2	4
Pay fees to the municipal	1	2
Pay wages to workers	1	2
Re-cycling	1	2
Sorting	7	12
Total	60	100

Source: Field Survey (2013)

The major roles of municipal council leaders as displayed in Table 21 include provision of transport for solid waste collection, supervision of CBOs engaged in solid waste management, enforcements of the by-laws and creating awareness among the stakeholders involved in solid waste management. Other roles include provision

of funds to CBOs, community policing participation, educate the community about environment cleaning and provision of working gears.

Table 22: The Roles of Municipal Council Leaders in Solid Waste Management

Municipal leaders roles	Frequency	Percent
Collection of SW from household level	1	2
Community policing participation	2	4
Create awareness	6	10
Educate on environment cleaning	2	4
Enforcement of by-laws	9	15
Environmental cleaning	1	2
Make timetable and follow up	1	2
Promotion of appropriate collection schemes	1	2
Promotion of partnership	1	2
Provide collecting tools	1	2
Provide funds to CBOs	2	4
Provide transport	18	25
Provide working gears	2	4
Sorting of SW	1	2
Supervision of CBOs in SW management	9	15
Training on SW management	3	5
Total	60	100

Source: Field Survey (2013)

1.4.2.20 What Should the Municipal Council to Improve CBOs Engaged in SW Management

Results in Table 22 show steps that should be taken by the municipal council in order to improve community based organizations engaged in solid waste management. Results in Table 23 show improvement of transport, provision of working gears, law enforcement, provision of community education about solid waste management and

improvement of relation among stakeholders involved in solid waste as the major steps that the municipal council should take in order to improve community based organizations engaged in solid waste management. Other steps include supporting CBOs organ development, support capacity building, provision of collecting tools and help CBOs in solving problems related to solid waste management.

Table 23: What Should the Municipal Council to Improve CBOs in SW

Step	Frequency	Percent
Conduct meeting with CBOs	1	1
Create awareness among SW stakeholders	1	1
Educate about SW as a commercial activity	1	1
Educate the community and advice CBOs	7	12
Enforce by-laws	8	13
Financial support	1	1
Improve relation among SW stakeholders	6	10
Improve transport	10	19
Increase their income	1	1
Make individual groups for SW collection	1	1
Provide collecting tools	2	4
Provide loan to CBOs	1	1
Provision of working gears	11	19
Solve CBOs problems	2	4
Support building capacity	2	4
Support CBOs organ development	5	9
Total	60	100

Source: Field Survey (2013)

Awareness raising and promotion of a suitable waste collection scheme is crucial for an effective urban solid waste management. There are efforts being undertaken by MMC to raise awareness on management of solid waste including collection, sorting and recycling. At present there few sign boards with promotional and awareness messages installed central business area. There is need to review the messages to be more and or coercive by including for example the obligation of community and

consequences of not abiding to SWM by-laws. Other methods like poster, brochures and leaf lets on SWM by-laws including benefits of sorting at source and different option for re-use and recycling of waste.



Figure 4 : MCC Awareness Raising and Enforcement Poster

Source: Field Survey (2013)

1.4.2.21 Challenges Encountered by CBO and NGOs Engaged in SW

Management

In overall, results in Table 24 show lack of capital, low level of community awareness about solid waste management and lack of entrepreneurship knowledge and skills as the major challenges facing community based organizations engaged in

solid waste management. Other challenges include lack of support from local government authorities, low household income and lack of by-law enforcement.

Table 24: Challenges Encountered by CBO and NGOs Engaged in SW Management

Challenge	Yes		No		Overall	
	N	%	N	%	N	%
Lack of support from LGA	46	77	14	23	60	100
Lack of capital	55	92	5	8	60	100
Lack of entrepreneurship	51	85	9	15	60	100
Low household income	45	75	15	25	60	100
Low level of community awareness	52	87	8	13	60	100
Lack of by-law enforcement	45	75	15	25	60	100

Source: Field Survey (2013)

Lack of capital, support from LGA and Low level of community awareness are the major leading challenges encountered by CBO and NGOs engaged in SW Management. Both Municipal Authority leaders and CBOs. Transport of waste from streets and collection points to the landfill located 5km north from centre of the town. Waste is picked and transported to landfill by MCC trucks at subsidized fee of 15,000 TSH per trip. Private trucks charge 30,000 to 40,000 shillings per trip. MMC trucks are few and in most cases not running due to mechanical and or fuel shortage.

At present only four trucks are running: Two 10 tons TATA, one 7 tons Tipper and one 4 tons skip loader truck. Other four trucks (one 8 ton compactor, one 7 ton Isuzu and 2 skip bucket loader. Each CBO is required to pay 120,000 shillings for eight trips per month but most CBOs do not afford to pay which results in a waste

accumulation at collection points, streets or other public areas. Only about 125 tons are transported and dumped in land fill.

1.5 Community Needs Prioritization/Leveling of Needs

The prioritization of the identified needs was done by ranking. The ranking used a **Grid Analysis tool**. The Grid analysis tool is a very good tool used to making decisions when one has many problems and factors or criteria to take into account. Therefore, the members were involved in prioritizing the identified needs by adapting and discussing on the four (4) criteria to be used in prioritization that were suggested by the CED student. The four criteria used were:

- (i) The degree of emergency (how urgent the situation or what need to be addressed first).
- (ii) The number of SWGS affected by a particular need (is high or low)?
- (iii) The ability/possibility to intervene the need (Can it be solved without
- (iv) Even getting support from outside? If yes, to which degree)?
- (v) The importance of addressing the identified need (is it a root cause of several problems? If intervened, will it reduce the prevailing problems or will it solve the consequences)?

The grid analysis tool was very important for helping the members gain new knowledge on how and why to select an intervention when having several interventions before them. The tool also was very helpful for members to own the intervention as the process helped them to see their abilities and possibilities of going on with the intervention or not. The levelling also motivated the members to participate adequately in the project implementation. Therefore, the score of the ranking were number one to five (1-5), whereby number one represented the lowest score and number five represented the highest.

Table 25: Needs Prioritization/Levelling of Needs

Needs	Criteria						
	The degree of emergency (how urgent the situation or what need to be addressed?)	The number of SWGs affected by a particular need (is high or low?)	To what degree CBOs of SWGs has the ability/possibility of intervening the need?	The importance of addressing the identified need	Total Score	Ranking	Ranking
Mobilize members of UVIWATAMO to form Legally NGO/CBOs and build Organizational development	5	4	3	4	16	2	2nd
promote community based Organization initiatives of SWM Groups into compost manure Scheme	5	4	5	5	19	1	1st
Train CBOs Members on SWM compost manure making	2	5	5	2	14	3	3rd

Source: Field Survey (2013)

1.6 Chapter Conclusion

The purpose of this chapter was to provide the general background of the participatory needs assessment and community profile information of the study area. The exercise was made possible as a result of addressing the main research questionnaires. However the overall objective of the research was to assess the role of Community Based Organizations Initiatives engaged in solid waste management in the Division in Morogoro municipality. Ranking techniques was done during group discussion in order to reveal certain aspects of target group's problem and prevalence's and what criteria apply to their choice, the aim was to discuss various aspects and rank their importance. Although the participatory needs assessment conducted came up with a list of problems, the community based organizations (CBOs) of MSWM came to understand themselves their problem of poor Governance in SWM, a challenge which of cause found to be a major source of a growing solid waste production and inadequate capacity to proper collection and management of solid waste in the town. Therefore three needs were chosen for intervention hence, promote community based Organization initiatives of SWM Groups into compost manure making was the first priority, secondly was to Mobilize members of UVIWATAMO to form Legally NGO/CBOs and build Organizational development, and the third choice was to Train CBOs/NGOs Members on SWM .

CHAPTER TWO

2.0 PROBLEM IDENTIFICATION

2.1 Background to Research Problem

This Chapter was to discuss about problem Identification, target Community, stakeholders, project goal, project objectives and the host organization. The participatory assessment conducted in the project community area come up with a list of problems. In addition the problem Statement clearly state what needs to be addressed, who is affected, what is its causes and consequences; what is the extent of the problem; how does it relate to the purpose of the respective organization or group and what will happen if the problem will not be addressed.

The statement define specific areas for target change and focus, and provides a direction for the proposed project before the community narrows down its problem that need to be addressed and changed. The findings revealed a number of challenges that need to be addressed. That is, Poor garbage collection, Low organizational capacity of CBOs, (most of CBOs are not registered), Inadequate safety and security for CBO workers: no protective gears, gloves and boots or any social security provided. Workers frequently get injured and or fall sick and are marginalized by community, Inadequate collection and transport facilities (few skip buckets, SUMO skip bucket decline from 68 to about 10 only), fewer operational MMC trucks and no payment of fees by waste sources. Traders in markets and residents in some wards, particularly those with space for local landfill (shimo la taka) and big businesses due to Low public awareness concerning SWM, Poor cooperation from some of LGA Officers (WEOs, Health Officers and street leaders and Interference by Street /Mitaa

leaders and business group leaders. No sorting at source (some sorting at collection points and in the truck but only plastic and glass bottles). Inadequate financial support to CBOs to purchase equipments and tools for solid waste collection and Composting of household solid waste.

2.2 Problem Statement

The rapid extent and nature of urbanization in developing countries made MSWM as a major issue of concern in those countries. “In the next 35 years, the urban population of world is expected to be double to more than five billion people, and from this 90% of growth is taking place in developing countries” (World resource institute, 1997; in Ahmed and Ali, 2002). As a result of this, the existing MSWM of developing countries fail to catch up with the rapid increase of solid waste production in these countries. To show this situation, UNCHS (1996) cited in Scherlen and Meyer (1992) report identified “one third to one half of solid waste generated with in most cities in low and middle income countries are not collected, rather it ends up as illegal dumps on streets, open spaces, and sewerage systems, and contribute to spread of diseases”. Furthermore, MSWM schemes generally serve only part of the urban population.

As a result, in poor suburban zones indiscriminate disposal of solid waste at riversides, roadsides, and other open spaces are common” (Henry *et al.*, 2005 cited in Gebrie, 2009). The health and environmental implications associated with garbage disposal are mounting in urgency, particularly in developing countries. However, the growth of the solid-waste market, increasing resource scarcity and the availability of new technologies are offering opportunities for turning waste into a resource.

Morogoro Municipal Division, as like other cities and Municipals in Tanzania is challenged with growing solid waste production and inadequate capacity to proper collection and management of solid waste. The problems and drawbacks call for formulation of a forward-looking zero waste strategy for the town. For decades, solid waste management of the municipal has been considered primarily as an engineering responsibility of the municipal council. Resultantly, collection and disposal of waste had been the only solution using conventional methods. Time has come now for the municipal council to adopt a new guiding principle and strategy for solid waste management.

The municipality is promoting private-Municipal partnership and has engaged the services of a private company to assist it in solid waste collection and disposal. Although there is a significant contribution from different stakeholders and partners of solid waste still the accumulation of solid wastes is at an alarming state. Total 272 tons of waste is generated per day of which only (35%) is collected and transported to landfill (MMC, 2013). Such situation has created serious health and environmental problems if not disposed of safely and appropriately by creating noxious smells, giving rise to polluting leachiest, providing breeding areas for countless flies and, in the wet season mosquitoes, Vermin also around.

A particularly important indirect effect is the blocking of drains, which causes local flooding with its associated environmental health risks and economic loss. The manner in which urban solid wastes are managed directly affects the metropolitan environment, the appearance of the town and the citizens' daily life. Illegal dumping is a persistent problem because it threatens human health and the environment,

imposes significant costs on communities, and has an adverse effect on quality of life. State and local agencies are responsible for establishing laws and programmes to control and prevent the illegal disposal of solid wastes along the roadside or on private property. A study made by Dr. Kimbi (2012), Mombo. (2013) and Swiss contact Tanzania (2013) indicates that beside the fact that Morogoro Division has a number of Community Based Organizations (CBOs) which are involved in waste management, these are only involved in collections of the waste at various points and collections of some cash from the urban (HHs) as their contribution for the Municipal council to haul the waste to the main Municipal dumping place. On the other hand over 90% of MSW collected is transported and disposed in an open landfill situated about 5 km outside from Municipal centre.

However Studies undergone by Kimbi(2012) and Mombo F,(2013) show that 50-80% of all household waste can be composted and turned into soil stabilizer, which has a market value if production and sale is properly organized. This project will provide an opportunity to reverse the way in which wastes management is carried on. Instead of waste being a problem, the processing of them into compost manure would change them to a Resource which will turn as an income generating activities to improve livelihood of CBOs. Environmental Management Act of 2004 among other things provides for public participation in waste management (URT, 2005). The Act also contains provisions which recognize the need for empowering Communities to be able to sustainably manage the environment in their respective area in the achievement of the goals set for poverty reduction and serving their livelihoods. This study aim to asses to what extent challenges encountered of unmanaged waste by the

Municipality can be reduced to the minimum through promotion of CBOs initiatives of SWM engaged in Composts manure making in most environmental friendly way however Concerted efforts are required to Operation analyze the M SWM.

2.3 Project Description

The project is a case study geared towards promotion of *community based organizations initiatives engaged in solid waste management in Morogoro Urban Division*. The overall objective of the study was to assess the role of Community Based Organizations Initiatives engaged in solid waste management in Morogoro municipality. However the CNA has revealed that there are number of factors which affect the Community Based Organization of SWM in the study area.

2.3.1 Target Community

The project targeted the Community Based Organization initiatives engaged in Solid waste management in Morogoro division in Morogoro Municipality. This voluntarily CBOs members operated under the supervision of Municipal safer city Morogoro. Safer city coordinator assisted the community members technically and the group had to sustain themselves financially. In the absence of community awareness Solid Waste Governance and by laws enhancement with regards to solid Waste management, Composite and income generating skills, these groups' members of SWM are not sure of being sustainable.

2.3.2 Stakeholders

These are those Partners who work together to achieve the common goal for the Community. These are those touched by the entire process of enhancing Community Based Organizations of SWM. These stakeholders include the community policing

Group members CPGs, CBOs engaged with SWM, police force, safer city Department of the Morogoro Municipal Council, The Ward Executive officers, street chair persons and Executives, private and public institutions, Religious institutions, political leaders, Businessmen and households and the like. The roles and responsibilities of the stakeholders were to support the project and create an enabling environment for successful implementation of the project. On the other hand it was emphasized that the roles and responsibilities of the CPG, CBOs members initiative and creative so that they improve trust and service delivery to motivate the community stake holders and beneficiaries participate fully in solid waste management activities.

These stake holders had different roles and responsibilities to the project as well as interests and influences. The involvement of the stake holders ensured attainment of the project goal. Community Based Organizations of SWM was to be promoted and enhanced through awareness creation and mobilization of community Based groups of SW to be registered legally. This was important since SWM Groups at addressing local public safety problems of Solid waste Disorders and make organization changes to support these efforts through community partnership, problem solving and organization transformation. Hence these elements are expressed through principles of community Governance such as leadership, vision, equality trust empowerment, service and accountability.

These organizational changes have transformed CBOs of SWM Groups and some achievements have been realized in the following areas “Support of funding and economic productivity, and employment creation for the promotion of community

based Organization initiatives. The realized achievement requires sustainable of SWM Groups systems, which are adapted to and carried by Municipality and its local communities. The project sought to empower and promote the formed UVIWATAMO to engage in SW practices activities *particularly in a decentralized composting scheme* which realize the expected project results.

2.3.3 Project Goals

The project goal was to enhance Community Based Organizations Initiatives engaged in solid waste management through compost manure making project in Morogoro Urban Division.

2.3.4 Project Objectives

These were specific accomplishments designed to address the stated problem and attain the stated goal. These specific objectives included the following:

- (i) To mobilize members of UVIWATAMO to form Legally NGO/CBOs and build Organizational development to enable them and get well structured including official registration, financial management skills, constitutionalization of responsibilities of leaders and members.
- (ii) To sensitize and influence functional partnership to promote community based Organization initiatives of SWM Groups to engage in compost production scheme.
- (iii) To organize and train 3 SWM Groups to initiate compost manure production.

2.4 Host Organization

The project host Organization was the Morogoro Municipal council's safer city program. Safer city was a three years (2000/2009 – 2019/11) Danish sponsored program through its sustainable Morogoro project – SUMO. It catered for technical

support to various community work groups (CBOs) and solid waste management and Environment Organization group as well as including community policing groups. Safer city under SUMO was concerned to ensure that Morogoro Municipality becomes a sustainable and safe local environment where Community is assured of

- (i) Producing soil conditioner from compost making.
- (ii) Reduce/minimize the amount of solid waste found around the Municipal areas.
- (iii) Control some diseases e.g. Malaria, Typhoid, Cholera Dysentery diarrhoea.
- (iv) Reduce insect like flies multiplication and bad smell found around the town.
- (v) Increase the employment to Municipal residents (CBOs etc) who will be engage on solid waste collection, disposal, and compost making/business.
- (vi) Reduce erosion cases so increase soil productivity.

The researcher was introduced to the safer city coordinator who attached him to the Division Solid Waste Health Officer to work with the UVIWATAMO group members in participatory approach. The work there, culminated into the formation and registration of the CBOs and community awareness creation, sensitization, lobbying and mobilization for CBOs of SWM initiatives engaged on Compost making to be promoted and enhanced.

2.4.1 SWOT Analysis

The focus groups discussion FGDs were used in conducting SWOT analysis based on openness and objectively planned Intervention of this proposed project. “Enhancing participatory community policing governance” directs its effects towards the following criteria “SWOT” which are strength (S) and weakness, (W) and Opportunities (O) and Threats (T).

Ideally strength and weakness are of internal nature and for the for near aspect (S) these relates to:

- (a) Skilfully utilization of operation and service systems and resources: equipments/material, finance, human power, and building structure.
- (b) Adherence to local and national political/social Influence – government directives of concern to the project management operations, social standards binding relations between communities and activities operational norms of conduct.
- (c) Streamlining economic differences facing communities, with price and costs of operations and services to be base on their capabilities to meet them.
- (d) Meeting Social development needs of local Communities and those living elsewhere in the country with both sides – Stakeholders and the organization to benefit on gain to gain (Parallel) levels.
- (e) Technology Improvement for the organization to meet current and future operation aspirations. This relates to skills enhancement to achieve high level productivity vide advanced efforts of project operators and coherent collaboration with stakeholders.

In the case of weakness (W), they are contributing factors to the inability of a project to perform productively. These are setbacks to progress, and the most common one are being:

- (i) Poor resources and absences of preventive maintenance to them (poor income generating, and skills orientation.
- (ii) Non compliance with national, local and Institution norms of conduct.
- (iii) Inefficient workforce, with poor management system intervals of technology and human relations.
- (iv) Social Cohesion among project management team and also between them and local Communities as well as stakeholders missing.
- (v) Absence of clearly defined project management and development strategies for way forward planning and sustainability assurances.

2.4.2 Mission

However as both strength and weakness appose each other, and with all depending on the sources of direction of respective management machineries and community policing members (works), efforts or mission of a project to get desired idea (vision) rest squarely on the existence of coherent collaboration between these groups, these community SWM projects proposed in the study area of committee towards stealing bottlenecks appearing to weaken its efforts. As for opportunities and threats, these are considered as external factors at work places with most being outside the control of an organization or as project. For threats, are beyond its control and others come in without notice, and as regards to opportunities they mostly refer to chances available for utilization and expansion of a project such as appropriate channels of communication with stakeholders public and community relations with partners within and outside project areas also acquisition of advanced operational skills and management talents from professionals and academic institutions.

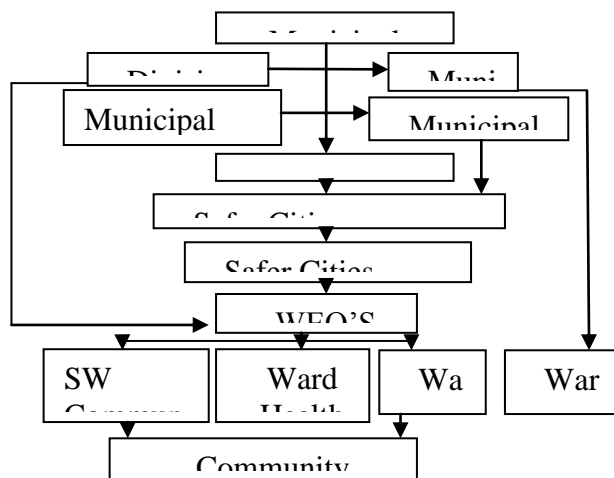


Figure 5 : Organizational Structure

Source: Field Survey (2013)

In general terms, threats are external forces of destruction challenged through preventive measures to be in place and reviewed time against similar efforts in the

case of opportunities for the project and these are going to focus predominantly on the following prominent areas:

- (i) The use of Constructive Communication channels body languages (gestures), written and oral contacts, messages. Community and Stakeholders Improved relations with focuses on gain to gain benefits.
- (ii) Prevalence of International and local projects expertise for project management personnel of all grades.
- (iii) Proper utilization of existing development resources at the project to reduce dependency on foreign inputs which are expensive or weaken local operational activities and Income generating project skills economic empowerment focuses. Putting this whole idea in summary form it will appear in the project in the following order

CHAPTER THREE

3.0 LITERATURE REVIEW

3.1 Introduction

The rapid urbanization that has been taking place during the 20th century virtually transformed the world into communities of cities and towns facing similar challenges on environmental issues in which most of them have to be addressed at international level (Smith, 2010). Among those environmental issues solid waste management is a critical one because so long as human beings living in settled communities, solid waste generation has been an unavoidable and critical issue both in developed and developing nations.

As a result, solid waste management became a worldwide agenda at United Nations conference on environment and development in Rio de Janeiro in 1992 with a great emphasis on reducing wastes and maximizing environmental sound waste reuse and recycling at first step in waste management (UNEP, 1996). Waste may be generically defined as heterogeneous mixture of materials, which are discarded as superfluous, and has no further use of value to its owner.

Solid wastes include all solid, semi – solid or non – soluble waste materials generated from domestic, street, institutions, commercial industrial waste, mining residues, municipal garbage, and sewage sludge but excluding excreta. Sometimes includes construction and demolition debris and other special wastes that may enter the municipal waste stream. Municipal solid waste generally excludes industrial hazardous wastes except to the extent that they enter the Municipal waste stream (Snell and Ali, 1999).

Solid waste is defined as ‘any material which is not in liquid form and has no value to the person who is responsible for it’ (Zurhugg, C₂ 2000). Literature review is an

important process in which relevant information is gathered on the subject matter (s) through wide reading of books and journals so as to clarify the researched problem and then making it simple. In literature review there are three aspects which are considered. These are:

- (i) Theoretical Literature Review:
- (ii) Empirical Literature Review and
- (iii) Policy Review

3.2 Theoretical Literature Review

3.2.1 Key Concepts on Solid Waste Management

3.2.2 Definitions of Key Terms

This section concerns with the review of various theories and conceptual framework on SWM, Solid Waste Management encompasses the whole process of living, ending, working, dying and utilizing consumer products whose production and use generate waste. Solid waste management is defined as the collection, transportation, processing, recycling, and disposal of solid waste materials so as to reduce their effect on health, environment and aesthetics.

It is highly related with urbanization and industrialization (web page accessed, august 20, 2013. For instance in early societies, solid waste management consisted of digging pits and throwing garbage into them. When cities began to be more concentrated; however, solid waste management became a serious and complex issue. Houses that did not have room to bury their garbage would throw it into the streets. In response, many cities started to set up municipal garbage collection teams which would dispose of unusable garbage. This is mainly because modern societies generate

far more solid waste than early humans ever did. As a result, recent events in major urban centers both in developed and developing countries have shown that municipal solid waste management has become a big challenge (web page accessed, august 20, 2013). Solid Waste has become a major concern and consequence of development and modernization.

Various writers and scholars have written about solid waste, emphasizing that its management is mostly felt in developing countries Waste - according to UK environmental protection act (1990), “it is any substance which constitutes scrap materials, an effluent or other unwanted surplus arising from application of any substances or article which requires to be disposed of which has broken, worn out, contaminated or otherwise spoiled”. Solid waste - can be defined as “any garbage, refuse, sludge, and other discarded solid materials resulting from industrial, commercial, agricultural operations, and community activities, but does not include dissolved materials” (U.S. Code of Federal Regulations, 1995 cited in Samuel, 2006).

Municipal solid waste (MSW) - refers to materials discarded in urban areas for which municipalities are usually responsible for collection, transportation, and final disposal. Municipal solid waste management - is an activity of planning and implementation of solid waste management components such as collection, transfer and transportation, recycling, resource recovery, and disposal MSW under jurisdiction of local government.

3.2.3 Sources and Types of Municipal Solid Waste

In order to categorize what exactly municipal solid waste constitutes, there have been different attempts of categorization based on numerous classification criteria. Some of those criteria are source from which solid waste emanates, and nature of solid waste components. On the basis of the nature of items that constitute solid wastes, it can be classified into organic or inorganic, combustible or non-combustible, and putrescible or non-putrescible (Edelman, 1997 cited in G/Tsadkan, 2002).

With respect to source from which solid waste emanates, (Martin, 2000) categorized municipal solid waste as household (residential) refuse, institutional wastes, street sweepings, commercial areas wastes, as well as construction and demolition debris. In developing countries, MSW also contains various amounts of industrial wastes from small scale industries. In these sources there are diverse types of solid wastes. But, some of typical solid wastes of those sources are described by (Dereje, 2001) as follows.

- (i) **Domestic solid wastes:** wastes generated from household activities such as food preparation, cleaning, fuel burning, old cloths, furniture, obsolete utensils and equipment, packaging, newsprint, and garden wastes. In developing countries, food waste and ashes dominate households' solid wastes.
- (ii) **Commercial wastes:** waste from shops, offices, hotels, restaurants, etc and typically consisting packaging materials, office supplies and food wastes. In lowincome countries food markets contribute the largest proportion of commercial waste.

- (iii) **Institutional wastes:** waste from schools, hospitals, clinics, government offices, military bases etc, and comprise hospital and clinical wastes including potentially infectious and hazardous materials.
- (iv) **Industrial wastes:** composition of industrial waste depends on the kind of industries
Involved. It consist food waste from kitchens, and canteens, packaging materials, plastics, papers and metal items.
- (v) **Street sweepings:** dust, soil, paper, etc. In developing countries street sweeping also include fruit and vegetable residues, household wastes dumped along roads, drain cleanings, animal manure and plant remains.
- (vi) **Construction and demolition wastes:** its composition depends on type of construction materials used, but it typically includes soil, brick, stone, concrete, ceramic materials, wood, packaging materials and the like.

The World Bank (WB) is very keen on solid waste management issues and has addressed the same from different dimensions, including: Overview of Solid Waste Management (SWM), SWM Strategic Planning, Institutional Capacity Building, Analysis of Technology Choices, Private Sector Involvement, Community Initiatives and Environmental issues.

3.2.4 Characteristics of Municipal Solid Waste

For effective and efficient management of solid waste generated in a particular city, adequate knowledge and data about the characteristics of solid waste is essential. In

order to decide or determine types of facilities required for solid waste management, best disposal options, and projecting future needs requires precise information about quantities, compositions, densities, moisture content and calorific value of solid waste produced in a city (Rushbrook, 1999 in G/tsadkan, 2002). Though all the above characteristics are important, for this study the researcher emphasize only on municipal solid waste physical composition and generation rate.

(i) Solid Waste Generation Rate: refers to the “amount of waste disposed during a given period of time and the quantification of it involves different methods: by measurement at the point of generation, through use of vehicle survey and by examination of records at the disposal facility” (UNEP, 2009; cited in Zebenay, 2010).

The rate of solid waste generated in a given town is basically determined by demographic growth, seasonal variation, geographic location, economic development and people’s attitude towards waste. Nashiimirimana (2004) explained the influence of economic development by comparing gross national product of developed and developing countries with their waste generation rate. And he concludes that the higher the gross national product of a country result the higher the generation of waste. It means due to difference in level economic performance, waste generation rate of developed countries is highly greater than that of developing countries. Although developing countries have a lower rate of waste generation compared to developed countries, their quantum of waste is high owing to their higher levels of population growth. This clearly shows impact of population size on waste generation rate (Ibid, 2004).

On the other hand, people's attitude towards waste can also conditioned solid waste generation rate in the form of their pattern of material use and waste handling, their interest in waste reduction and minimization, and the degree to which they refrain from indiscriminate dumping and littering (Schubeler, 1996). Therefore, an accurate knowledge of quantity and rate of solid waste generation in a given area is essential for preparation and implementation of appropriate MSWM. Because it provides information on human, financial and equipment resources required for collection and transportation of waste, to enact appropriate laws on waste reduction, and establish current and future needs for solid waste disposal sites (Abel, 2007).

(ii) Physical composition: refers to quantity of various material types in a particular waste stream. Just like waste generation rate, physical composition of solid waste is also extremely variable as a consequence different factors. The major once are of the following:

- (a) Economic level difference: higher income areas are usually produce more inorganic waste while low income areas produce relatively more organic waste.
- (b) Demography (difference in amount of population for example, tourist places).
- (c) Locations: includes abundance and type of regions natural resource, and socio-cultural factors which highly contribute for variation of waste in different areas.

Unlike various composition of solid waste in different areas, process of defining waste composition is similar in each area i.e. by measuring mass percentage of each material group present in a sample. Conduct of waste composition studies by using this method has several importance's. "Some of these are: for identification of potential resource recovery activities, facilitate collection, transport and processing

equipment, taking essential health, aesthetic and environmental precautions, and for monitoring changes in waste composition over time and improving waste management system” (Gidarkos, Havas, and Ntzamilis, 2005). Therefore, composition study is core stone for successful planning and implementation of solid waste management.

Generally, local government laws give exclusive ownership over waste once it is placed outside a home or establishment for collection. However, in economies develop with increase in population there arises a need for integrated SWM so as to involve the community, particularly private sector involvement. The WB emphasizes that the responsibility for providing SWM services rests on the Local Government Authorities.

However, given the fact that the rate of urbanization and development of Municipalities and cities all over the world is on the increase especially in the developing countries then participation of other stakeholders in SWM activity is necessary. The concept of Public Private Partnership (PPP) is necessary so that NGOs, CBOs, SMEs, Public Authorities and the community at large are involved in SWM in this arrangement, the main partners and their roles should be well stipulated to enhance effectiveness and efficiency in SWM.

(iii) SWM Strategic Planning: is called upon for integrated SWM systems that are responsive to dynamic demographic and industrial growth. The strategy starts with the formulation of long – term goals based on local urban needs, followed by a medium and short – term action plan to meet the goals. The strategy identifies a clear set of integrated actions, responsible parties and needed resources.

(iv) Institutional Capacity Building: reflects the need for accountability, practical and efficient collection of waste, capturing economies of scale, financial aspects, and management. It is taken that SWM is a Municipal responsibility in nearly all developing countries. However the institutions that provide the service typically need to be restructured so that they are more accountable and transparent to the residents and business establishments they serve. This calls for responsible management and organizational development with the involvement of the private sector.

(v) Analysis of Technology Choices is another area whereby Solid: waste collection methods need to be cost – effective, appropriate, maximizing and inclusive since the activity is always labour intensive. Systems that offer the lowest possible costs have to be adopted to motivate service beneficiaries to pay. Effective private sector involvement can lower collection costs. This is so since success factors of competition, transparency and accountability are present. Private sector is believed to be capable of improving efficiency and lowering costs which will motivate service beneficiaries to pay.

(vi) Community Initiatives: are important for good solid waste services. The initiative may include voluntary solid waste collection through cooperatives, CBOs or partnerships. Compositing activities are also part of community activities. These, apart from assisting in solid waste collection they also provide employment and income generation opportunities for the majority urban poor. The community should also be encouraged to minimize waste production by offering trainings on solid waste sorting for re – use, recycling and compositing. On the other hand informal solid

waste collectors (scavengers) should be organized, legitimized, upgraded and supported so that they contribute to the SWM efforts.

Apart from solid waste collection, transfer, recycling, resource recovery and disposal it is also important to address environmental issues related to SWM due to public concern and sensitivity to environmental issues. These issues include: Health and environmental impacts of accumulated uncollected waste and clandestine disposal sites; Health and environmental impacts of solid waste facilities, including transfer, composting and landfill sites; Air emissions from solid waste collection and transfer vehicles; and Special handling and disposal of hazardous waste, including health care and industrial hazardous waste. However, the SWM environmental issues should respond to the Municipal and national environmental policies and regulations.

3.2.5 Functional Elements of Municipal Solid Waste Management

In the course of municipal solid waste management there are six functional elements. Identification of these functional elements allows description of relationships involved in each element, and development of a framework. As a result, to handle a specific solid waste management it is obligatory to observe the following six elements in combination. These are:

3.2.6 Waste Generation

Waste generation encompasses activities in which materials are identified as valueless and either thrown away or gather together for disposal. This functional element is very important because all activities that lead to identification and understanding of solid waste generation rate, volume, composition, area specific

variations of waste generation and their expected changes overtime are belong to this component solid waste management. So, this functional element is a vital stage for acquiring accurate information that is necessary to monitor existing management system and to make regulatory, financial and institutional decisions (Gebrie, 2009).

3.2.7 On Site Handling, Storage and Processing

This functional element constitutes activities associated with handling, storage, and processing of solid wastes at point of generation. Waste handling involves activities associated with management of wastes until they are placed in storage containers for collection. It also encompasses movement of loaded containers to point of collection. Storage refers stock up of wastes as soon as they are generated. There are two types of storage activities at source.

The first one is temporary storage done at household level as a part of their hygiene. The second type is communal solid waste storage system on public solid waste containers prepared by municipality. While processing at source involves activities such as waste composting and separation of solid wastes for reuse and recycling. All of these components are important for protection of public health and aesthetics and environment (Web page accessed, august 27, 2013).

The who (actors) section in the conceptual framework include Local and Central Government Authorities; Private Sector, Informal Sector; Service Users; NGOs and ESAs. And the how (Strategic) aspects in conceptual framework include political institutional; social; financial; economic and technical aspects. It is obvious, therefore that the conceptual framework of SWM is structured around political and socio – cultural context.

3.2.8 Collection Involves the Process of Picking

Up of wastes from collection points, loading them in to a vehicle, and transporting it to processing facilities, transfer stations or disposal site. In most municipal solid waste management systems, cost of collection accounts a significant portion of total cost. For instance, “in industrialized countries collection accounts about 60-70% of total cost, and 70-90% in developing and transition countries” (UNEP, 1996). Collection is structurally similar in developing, transition, and industrialized countries, but there are important technical and institutional differences in implementation. In most cases, industrialized countries have more efficiency and effectiveness than developing ones in terms of their approach of collection, role of municipal governments, private-sector participation, and demographic and social factors relevant to collection.

In developing countries, collection often involves a face-to-face transaction between generator and collector. The level of service is low, and generators often have to bring their wastes long distances and place it in containers. As a result many collection activities in developing countries carried out by informal sectors (UNEP, 1996). In general, there are four basic methods of collection described by (Tchobanolous, *et al.* 1993 cited in Ramachandra and Bachamanda, 2006):

(i) Community bin: they are placed in convenient locations where community members carry waste and throw it in. This method is comparatively cheaper than other methods, and most widely adopted method in western countries. For this method to be adopted it is important that bins are covered, aesthetic, attended regularly, kept clean, easy to handle, and separate bins are provided.

(ii) Curbside collection - homeowner is responsible for placing containers to be emptied at the curb on collection day and for returning empty containers to their storage location until the next collection.

(iii) Block collection- collection vehicles arrive at a particular place or a set day and time to collect waste from households. Households bring their waste containers and empty directly into the vehicle. This method requires a higher homeowner cooperation and scheduled service for homeowner collaboration.

(iv) Door to door collection- waste is placed at doorstep at a set time when waste collector arrives. In this method, collector of waste has the responsibility to collect waste separately. This method is very convenient for households, however requires homeowner cooperation.

3.2.9 Transfer and Transport

These activities are associated with transfer of wastes from public storage facilities to collection vehicle and the subsequent transport of wastes to disposal site. Transfer refers to movement of waste or materials from primary collection vehicle to a secondary, larger and more efficient transport vehicle. When location of final disposal site is at a long distance from points of collection, transfer stations may be used. With respect to transfer stations, “there are two basic modes of operation: direct discharge and storage discharge. In storage discharge refuse is first emptied from collection trucks in to a storage pit or to a large platform. While in direct discharge station, each refuse truck empties directly in to larger transport vehicles” (Meenakshi, 2005). Transportation on the other hand covers all types of vehicles under operation

to transport solid waste from its generation point to transfer station and then to treatment or disposal site. “All vehicles in operation are considered including manually driven small carts, mechanically driven sophisticated transportation vehicles, and special vehicles for hazardous, bulky, and recyclable wastes. Generally, a properly design transfer and transportation system highly reduces cost of collection” (Ibid, 2005).

3.2.10 Processing and Recovery

This functional element includes all techniques, equipments and facilities used both to improve the efficiency of other functional elements and to recover usable materials, conversion products, produce energy, and compost from solid wastes. In addition it also provides several advantages. First, it can serve to reduce total volume and weight of waste material that requires collection and final disposal. Volume reduction also helps to conserve land resources since land is the ultimate sink for most waste materials.

On the other side, it also reduces total transportation cost of waste to its final disposal site (Urinat and Philemon, 2008). Solid waste processing and recovery has been carried out beginning from separation and processing of wastes at the source. But, separations of mixed wastes usually occur at materials recovery facility, transfer stations, combustion facilities and disposal sites. It often includes separation of bulky items, separation of waste components by size using screens, manual separation of waste components, and separation of ferrous and non-ferrous metals. Then they enter in small and large scale industries for recovery activities. For example, organic fraction of MSW can be transformed by a variety of biological and thermal processes.

The most commonly used biological transformation process is aerobic composting and, the most commonly used thermal transformation process is incineration (web page accessed, august 27, 2013).

(i) Disposal

This is final functional element in solid waste management system. Disposal activities are associated with final dump of solid wastes directly to a landfill site. Today disposal of wastes by land filling or land spreading is the ultimate fate of all solid wastes whether they are residential wastes, or residual materials from materials recovery facilities. “However, in most developed countries this method is officially banned allowing only sanitary landfill for final disposal. Because sanitary landfill is not a dump it is an engineered facility used for disposing of solid wastes on land without creating nuisances or hazards to public health and environment” (Techobanglous, 2002). “Though it is the most common technology around the world, conventional and environmental unfriendly methods such as open-burning, open-dumping, and non-sanitary landfill can still be used as disposal method” (UNEP, 2009).

3.2.11 Economically and Environmentally Sustainable Municipal Solid Waste Management Methods

(i) Incineration

Incineration is one option for sustainable solid waste management. It is defined as the process of burning solid waste under controlled conditions to reduce weight and volume of solid waste, and often to produce energy. This process is really waste reduction, not waste disposal, though following incineration ash must still be

disposed. It is recognized as a practical method of disposing of certain hazardous waste materials (such as medical waste). Incineration can be carried out both on a small scale by individuals and on a large scale by industry. Generally, according to UNEP (1996) there are considerations that we should keep in our mind when we want to choose incineration. These are:

The necessary environmental controls are properly installed and maintained.

- (a) The facility is properly sized and sited to fit well with other components of the MSWM
- (b) The material to be burnt is combustible and has sufficient energy content.

(ii) Composting

It is a process of allowing biological decomposition of solid organic materials by bacteria, fungi, worms, insects, and other organisms into a soil for transforming large quantities of organic materials to compost (humus like materials). “The organic materials produced by composting can be added to soil to supply plant nutrients such as nitrogen, phosphorus, potassium, iron, sulfur, and calcium, slow soil erosion, make clay soils more porous or increase water holding capacity of sandy soils” (Enger and Smith, 2008).

3.3 Conceptual Framework

This section provides brief definitions of the main concepts of SWM and identifies the goals and principles that normally guide SWM system development. It discusses key objective issues which should be addressed by SWM strategies with regard to political, institutional, social, financial, economic and technical aspects. The section explores SWM and social development, explaining causes and effects variable. Solid

waste from industrial, commercial and institutional establishments (including, hospitals), market waste, yard waste and street sweepings. SWM involves the collection, transfer, treatment, recycling, resource recovery and disposal. The strategic aspects; political, institutional, social, financial, economic and technical, are explained here below.

(i) Political aspects: concern the formulation of goals and priorities; determination of roles and jurisdiction and the legal and regulatory frame work. Institutional aspects concern the distribution of functions and responsibilities and correspond to organization structures, procedures, methods, institutional capacities and private sector involvement. Social aspects include the patterns of waste generation and handling of households and other users; community based waste management and the social conditions of waste workers. Financial aspects concern budgeting and cost accounting; capital investment; cost recovery and cost reduction. Economic aspects are concerned with the impact of services on economic activities; cost effectiveness of SWM systems; macro – economic dimensions of resource use and conservation and income generation.

And technical aspect are concerned with the planning and implementation and maintenance of solid waste collection and transfer systems; waste recovery; final disposal and hazardous waste management. The structure and content of the conceptual framework is structured along three principals and dimensions corresponding to the following questions:

- (a) What is the scope of SWM activities?
- (b) Who are the actors and development partners in the field?

(c) How should strategic objectives and issues be addressed?

In the what (scope) aspect the conceptual framework is structured on the following:

3.3.1 Empirical Literature Review

The Dar es Salaam City Council and its three Municipalities of Ilala, Kinondoni and Temneke promote sustainable urban development as it was with SUMO in Morogoro Municipal Council. As part of this promotion an integrated SWM strategy has been implemented on a PPP basis with technical support from the ILO (Dar es Salaam) and DANIDA (Morogoro). The partners include private waste contractors comprising of companies, NGOs and CBOs.

However, as for the Morogoro Municipality the main partners are the CBOs which are popularly called 'work groups'. The purpose of the Dar es Salaam City and Morogoro Municipality programs were:

- (a) To improve the cleanliness of the city and the Municipality through increased collection and disposal of waste;
- (b) To create sustainable income generation activities for formal and informal SMEs involved in waste collection, recycling and composting and;
- (c) To create decent employment opportunities for the urban population, women and youths in particular.

SWM is a concept which needs further sensitization so that our communities understand its importance. There are a lot of potentials in solid waste, as far as income generation and employment creation are concerned. This is so because waste

is plentiful; waste is free; waste needs little capital; waste sells for cash; waste is familiar; recycling of waste is approved; the waste sector employs many women and youths; and people when sensitized are willing to have their environment cleaned. Hence if well carried out solid waste activities will become attractive, with more people joining in the sector. This therefore calls for:

- (i) Capacity building of solid waste practitioners in the form of business and technical skills;
- (ii) Training in technical and occupational safety and health;
- (iii) Public awareness raising and enhancing community participation;
- (iv) Information on marketing of recyclable materials; and
- (v) Institution and enforcement of by – laws and regulations on payment of solid waste collection service fees.

The Government of Tanzania is working hard to implement integrated solid waste management. However, inadequate allocation of funds hinders smooth implementation of the Urban Development and Management (UDEM) program which was started in 2007/2008 financial year in which all cities, Municipalities and Towns are the beneficiaries to this program.

3.3.2 Case Studies

This section shows some few case studies explaining project done in relation to this project moved to a dumpsite by tipper or trailer. The group is being paid the RCC directly by the service beneficiaries by visiting them, while others pay at the group's offices. However, there are times the group asks for assistance from the local leaders for them to be paid, with others being sent to court.

(i) The Morogoro Municipality Case

The case of Morogoro Municipality is the opposite of the Dar es Salaam one. In Morogoro the work groups are doing everything on their own efforts and are being paid only through the trust the community has in their work. Very little assistance is being received from the municipal authorities. The groups are not in legal partnership with the Municipal Authorities for them to effectively undertake solid waste collection. However, this trend is of late being reversed through the efforts of some work groups.

(a) Umoja wa Watunza Mazingira Morogoro.

This is the legally registered NGO, known in its Kiswahili acronymy as “Umoja wa Watunza Mazingira Morogoro”. It caters for solid waste collection in ‘Uwanja wa Taifa Ward’, among other environmental activities. However, as it is with other work groups it has to push its way for them to be paid by the service beneficiaries with little assistance from the Morogoro Municipal Council Authorities. The need for contract partnership is therefore called for

(b) Twende Pamoja Group

This is a work group involving itself in solid waste collection within Mbuyuni area, Mazimbu Ward. They are famous for cleaning the main Morogoro Bus Terminal – Msamvu. They are also famous in composting whereby they have a one acre garden growing a variety of vegetables using the fertilizers from the composted waste. They are doing selling of the grown vegetables and some fertilizers to small gardeners within the Morogoro Municipality. They are now in the process of being registered

(ii) The Philippines Case

In Philippines, SWM is entrusted to the country's Ecological Solid Waste Management Act, 2000 and National Solid Waste Management Council is in place. The Act provides for a similar commission to be created in each province and Local Government Unit to be responsible for the implementation and enforcement of the Act within their jurisdiction. The Local Government Unit assigns roles to the public and private sectors in providing collection services and types of collection systems that meet their needs. Some minimum requirements for the segregation, storage, collection and disposal are as follows:

Given the important responsibility of SWM any private sector waste group that seeks to provide a service must be authorized by the relevant authorities who monitor and ensure the delivery of the sought services which are adequately and timely paid by the service beneficiaries.

The project has learned from the experiences of the International Labour Organization (ILO) office for Kenya, Somalia, Tanzania and Uganda on its 'Employment Creation, Municipal Services Delivery in Eastern Africa – Improving living conditions and providing jobs for the poor' program. The area of emphasis was on the training package for 'Integrated Solid Waste Management with an Entrepreneurship Perspective for Municipalities in Eastern Africa'. This area addressed both common and specific problems with Municipal SWM.

The ILO program, launched at the Sea Cliff Hotel, Dar es Salaam, Tanzania on Wednesday 21st January, 2004 aimed at the 'Promotion of Employment and Income

Generation through Integrated Solid Waste Management’. The main method of delivery being on ‘Entrepreneurship Training’. The program so far shows that well planned SWM contribute to poverty reduction by creating decent employment opportunities and generating sustainable income. At the same time, it is possible to make our environments cleaner. The vivid case study is Dar es Salaam in Tanzania and Kampala in Uganda. The results for Dar es Salaam, for example show that:

- (i) Solid waste collection is in the hands of private contractors since 1998, which shows that the activity is lucrative;
- (ii) More than 3,000 jobs, especially for women and youths have been created;
- (iii) Child Labour in solid waste collection has been eliminated;
- (iv) Dar es Salaam City is cleaner than before the program
- (v) Other Cities and Municipalities go to Dar es Salaam to learn their experience;
- (vi) Waste disposal to the City dump has increased from less than 4% in the early 1990s to about 40% in the year 2001;
- (vii) Waste collection and disposal services are all over the City including the unplanned settlements. This has improved the environment and reduced health impacts;
- (viii) Women and men; youth and old are all involved in solid waste collection now than it was before; and
- (ix) Solid waste is now realized for its value through re – cycling, re – use and composting activities which are on the increase.

The project worked closely with the ILO program for the purpose of taking their experiences into the project. The Program's Training Manual was adopted and exchange visits were arranged.

The World Bank emphasizes provision of solid waste collection services that satisfies the needs of the end users. This intervention started during the 1990's with an inter-agency solid waste collaborative working group, which looked on SWM Strategic Planning, Institutional Capacity Building, Financial Capacity Building Analysis of Technology Choices, Private Sectors involvement Community initiative and Environmental issues.

SWM Strategic Planning is important for addressing the growing population and industrial activities. The intervention should be clear on the required SWM actions, stakeholders and resource needs (Human, physical and financial). With this, involvement of the private sector is emphasized. The project has adopted its approach by initiating the formation and eventual registration of the NGO which combined the numerous CBOs which were hitherto operating without legal status. Institutional Capacity Building responds to the issue of accountability in SWM. Those involved in SWM should be accountable to the people they serve, including households and business. At the same time the beneficiaries should also be accountable to the ones who provide them with the solid waste collection services. The Project addressed this need by instituting and registering an NGO, which is a legal institution for enforcing the accountability aspect. With this NGO in place it is easy to conduct trainings, organizational development support and awareness creating.

The project also captured the Financial Capacity Building aspect. Through payment of solid waste collection fees the community is undertaking some cost – sharing with the solid waste collectors. In solid waste collecting, transferring and disposing of the solid waste. The project; ‘enforcing payment of solid waste collection fees through Association Building’: The case of Morogoro Municipal solid waste collection Groups shows a way towards the cost – sharing element within financial capacity building.

3.4 Policy Review

There are several rules, regulations and by – laws which guide SWM in Tanzania. As we have seen above the responsibility of solid waste collection rests in the hands of Local Authorities. The Central Government enacts Laws while Local government authorities enact by – Laws. Among the Laws and by – Laws Governing SWM in Tanzania include:

- (i) The National Environmental Policy (NEP:1997)
- (ii) The Environmental Management Act (2004)
- (iii) The Local Government Act No. 7 & 8 (1982)
- (iv) The National Employment Policy (1997)
- (v) The Microfinance Policy (2002)
- (vi) The Small and Medium Enterprise (SMEs) Development Policy – SIDP (1996/2020)
- (vii) Tanzania Property and Business Formalization Program (January, 2005)
- (viii) MKURABITA

- (ix) The National Strategy for growth and Reduction of Poverty (NSGRP)
MKUKUTA
- (x) Tanzania Development Vision 2025

3.4.1 The National Environmental Policy (1997)

Among the goals of SWM include protections of environmental health and promotion of the quality of the urban environment. The NEP policies on issues concerning national environment. The policy supports SWM as it gives guidelines and legal obligations. The design and operations of SWM must e adapted to the NEP. Town planning, settlements, density, width and condition of roads, topography, etc. need to be considered when designing SWM interventions.

The NEP also talks about natural systems, including conditions and characteristic of local natural and ecological systems. SWM takes into consideration the degree to which uncontrolled waste dump sites become breeding grounds for insects, rodents and other disease vectors. Hence, the need for enhancing the frequency with which solid waste collection points must be serviced in order to limit negative environmental consequences. The NEP also talks about air pollution, which is often caused by open burning at dumps and foul odours and wind – blown litter. The suitability of a disposal site to protect the environment is also looked upon.

3.4.2 The Environmental Management Act (2004)

This act of as encompass formulation of goals and priorities: determination of roles and jurisdiction and Establishment of legal and regulatory framework> the SWM also looks on these issues< as strategies for its success> the goals and priorities within

SWM must enjoy broad popular support for them to be successful> Otherwise, they may be taken as ‘public goods’, thus missing the important community support. Effective SWM and environmental protection programs call for a clear definition of roles, jurisdictions, legal responsibilities and rights. The Act stipulates all these to avoid controversies, ineffectiveness and / or inaction undermining sustainability of SWM systems. On the other hand, regulations are required to be few in number, transparent, unambiguous and equitable.

3.4.3 The Local Government Act No. 7& 8 (1982)

City and Municipal councils are among Local Authorities established by Local Government (District Authorities) Act No. 7 of 1982 and Local Government (Urban Authorities) Act No. 8 of 1982 respectively. The two parent acts inter – alia give fundamental duty to the Local Authorities to ensure that there is a proper, effective and efficient management system of collection and disposal of waste within their areas of jurisdiction.

The county’s policies mentioned above try to highlight the country’s goals and objectives on the issues attached to each policy. What can generally be said is that these policies emphasize community roles and responsibilities. Without the community being aware of the policies and assume their roles and responsibilities then the policies will remain to be of no use to the community.

3.4.4 The National Employment Policy (1997)

The major objective of the National Employment Policy (1997) was to increase employment opportunities leading to poverty reduction by creating an enabling

environment for all stakeholders to participate fully in human capital development and employment promotion to attain high rates of economic growth.

However, due to some constraints to employment growth and emerging labour market challenges the policy has been revised to the 2007 version. The revision is linked to Tanzanian's major macro and sectoral policies as well as program initiatives undertaken at micro – levels to provide direction and focus on employment creation initiatives.

SWM is one of the opportunities for employment creation for the poor people in urban centers, especially working women and youths. Hence, once SWM is well planned and services are adequately paid by service – beneficiaries definitely these people will be motivated in the solid waste collection activities and get employment and generate income for their livelihoods.

3.4.5 The Microfinance Policy (2002)

This policy covers the provision and access of financial services to SMEs in both rural and urban centres. When looking at SWM the formal and informal entrepreneurs are brought in as private sector actors. The informal entrepreneurs need to be organized, legalized and supported so that they turn into legal entities capable of accessing financial services as stipulated in the microfinance policy (2002).

3.4.6 The Small and Medium Enterprises (SMEs) Development Policy (2003)

SMEs play a crucial role in employment creation and income generation in Tanzania. SMEs are easily formed which implies that people engaged in solid waste collection can form their formal enterprises to serve for employment creation and income

generation. This will contribute to the realization of the country's Development Vision 2025 on income poverty reduction.

3.4.7 The Sustainable Industrial Development Policy – SIDP (1996 – 2020)

This Policy places specific emphasis on promotion of small and medium industries through the following measures:

- (i) Supporting existing and new promotion institutions;
- (ii) Simplification of taxation;
- (iii) Licensing and registration of SMEs and
- (iv) Improve access to financial services

In addition, SID encourages informal sector business to grow and be formalized. Furthermore, the policy identifies measures to enable indigenous entrepreneurs, women youth and people with disabilities to take part in economic activities. This policy therefore supports the growth of informal sector in the SWM.

3.4.8 The Tanzania Property and Business Formalization Program

MKURABITA

This program is for harmonizing businesses and properties of the Tanzanians poor in effect facilitating transformation of properties and businesses from the informal into formal sector. It is one of the many interventions by the Government of Tanzania in an effort to provide relief to the Tanzanian masses of lower and medium income earners. The idea is to absorb the potentials of the informal sector in the national economy in terms of income accounting. Hence, reduction of income poverty and contribution to the

attainment of Tanzania's Development Vision 2025 and the Millenium Development Goals 9MDGs). The SWM also works toward supporting informal sector change to formal sector to contribute in employment creation and income generation.

3.4.9 The National Strategy for Growth and Reduction of Poverty – (NSGRP)

– MKUKUTA

The NSGRP aims at growth and reduction of poverty through its three major clusters of growth and reduction of income poverty; improvement of quality of life and social well – being and governance and accountability. This generally is a direction towards improvement of the people's well – being or livelihoods. The SWM programs also aim at income generation hence income poverty reduction. It is within this scope that the Project Supports MKUKUTA in the area of income poverty reduction.

3.4.10 Tanzania Development Vision 2025

Tanzania Development Vision 2025 seeks to transform the country from a low productivity agricultural economy to semi – industrialized one led by modernized and highly productive agricultural activities which are buttressed by supportive industrial and service activities through actively mobilization of people and other resources towards the achievement of shared goals.

In the Poverty Reduction Strategy the Government has decided to promote private sector participation through its Private – Public – Partnership (PPP) approach. There is a lot to learn from the requirement of Tanzania Development Vision 2025, particularly on private sector participation in SWM.

3.5 Literature Review Summary

The Project intervention was towards ensuring the intervention would end up with having more CBOs which meet the current demands and situations. This implies review of the current solid waste management system taking into consideration the fact that there is no one comprehensive national policy to address SWM in the country. The world, through the UN's Agenda 21 (1992) gives direction to cities and municipalities to enhance urban sustainability.

It is important to ensure that delegation of powers, assignment of responsibilities and review of solid waste collection CBOs are streamlined to involve all stakeholders to SWM projects. To enable them to collect huge amount of solid waste which will be used to make the compost manure project sustainable.

CHAPTER FOUR

4.0 PROJECT IMPLEMENTATION

4.1 Introduction

This section list the activities planned and executed. The Project activities aimed at mobilizing solid waste SWM Groups CBO to initiate compost manure productions in Morogoro urban Division within Morogoro Municipal Council form and register an Association through which they will be able Groups to initiate compost manure production.

The activities resulted into a legally formed and registered NGO in the name of *Umoja wa Vikundi vya Wazoa Taka Morogoro* (UWIWATAMO). The Local Framework Analysis (LFA) matrix guided the Project implementation exercise.

On the other hand, the implementation plan highlighted the planned inputs, expected outputs and planned time – time – frame for the project. The implementation plan involved the researcher, the target community and other beneficiaries. The planned time – frame for the project was 18 months.

4.2 Project Outputs

Project outputs are project indicators. This measures or assesses the performance of the project's objectives. These are either quantitative or qualitative and are easier to measure, while impact indicators are not that easy to measure, as they provide an assumption that the achievement of project activities have resulted in some changes which, however cannot be proved.

4.2.1 The UVIWATAMO SWM Implementation Plan

Basing on the analysis of community Needs identified to chapter (2) here below is the intervention logical frame work of UVIWATAMO SWM Development plan has the goal, one purpose, out puts and activities.

Goal: To enhance Community Based Organizations Initiatives engaged in solid waste management through compost manure production scheme in Morogoro Urban Division.

Purpose 1: To Promote SWM Groups into compost production scheme and mobilize members of UVIWATAMO to form Legally

NGO/CBO

Outputs:

- (i) Community Based Organizations (CBOs of SWM) identified and registered into UVIWATAMO- CBOs in place,
- (ii) Constitution for CBO's of SWM and Registration certificate in place,
- (iii) Prospective SWM partners and 3CBOs for Compost manure making identified and budgets in place

4.3 Project Planning

In Project Planning the set up of the whole project planning is described. A planning table is developed describing who is responsible for undertaking each activity, the resources required and planned delivery timeline. In Project Planning the Implementation Plan; Inputs; Staffing pattern and Budget are outlined. The intention is to show the status of Project, to-date.

Table 26: Log Frame for UVIWATAMO Solid Waste Managment

Intervention logic	Objectively Verifiable indicators	Means of verification (MOV)	Assumption
Goal/Overall objectives Enhanced SWMCBOs engaged into compost Manure production scheme	Enhanced SWM Groups initiative by 2015	-CBOs progress report - Division report - CBOs meetings and workshop report	- Stakeholders participation - CBOs participation - Compost manure productions - Economic and political stability
Purpose/Immediate . To Promote SWM Groups into compost production scheme and mobilize members of UVIWATAMO to form Legally NGO/CBO	Increased number of participants(SWM Groups) engaged in to Compost manure production scheme from 3 to 15by 2015	- Ward progress report - CBOs report - CBOs meetings and workshop report	- Relative security prevails - Stable community economic - Availability of funds
Output 2 Constitution for UVIWATAMO- CBO of SWM and Registration certificate in place	i) Increased members of CBO's of SWM registered into UVIWATAMO by 50% by 2015 ii) Increased number of CBO's groups with leadership and	- UVIWATAMO CBO's constitution - Certificate of registration - CBO's leadership - Minutes of committee meetings	- Consistence and stable - Constitution - Availability of fund

	management by 50% by 2015		
Output 3 Prospective SWM partners and 3CBOsGroups for Compost manure production identified and budgets in place	i)Increased members of CBOs of SWM engaged into Compost manure production by 50% by 2015 ii)Increased number of prospective patinars of SWM from 2 to 15 by 2015 iii)Increased number of CBO's trained on Compost manure production skill from 3– 15B by 2015	<ul style="list-style-type: none"> - Division report - SW groups registered as CBO's - CBOs activities report - Budgets - CompostmanureProduction schemes 	<ul style="list-style-type: none"> - Availability of funds from stake holders - Local Government - Central Government - Private partners - CBOs contribution

Source: Field Survey (2013)

Table 27: Project Implementation Plan

No	Objective	Activities	IMPLEMENTATION SCHEDULE												Resources need	Estimates	Person responsible	
			YEAR ONE				YEAR TWO				YEAR THREE							
			1	2	3	4	1	2	3	4	1	2	3	4				
1.	To enhance SWMCBOs engaged into compost Manure production scheme	i) Create awareness to members of SWM(UVIWATAMO) to initiate Compost manure production scheme														- Human resource - Stationeries - Transport (hiring) - Refreshment	65,168,000	-Researcher -Safer city/Sumo -CPGs -WEO -MEO's
		i)Constitutional development and UVIWATAMO CBO's Registration														- Consultation fee - Qualified leader'	35,000,000	- Researcher - Municipal safer coordinator - Community policing police officers - WEO - MEO's
		ii) Leadership selection and stuff ii)Recruitment															546,000,00	
		iii)Training of UVIWATAMO leaders on managerial skills iv)Conduct training on SWM and compost manure skills and suitability														- Venue fee - Refreshment/ LUNCH - Transport and fuel - Fare for participants	15,420,000	

No	Objective	Activities	IMPLEMENTATION SCHEDULE												Resources need	Estimates	Person responsible	
			YEAR ONE				YEAR TWO				YEAR THREE							
			1	2	3	4	1	2	3	4	1	2	3	4				
2	To develop Constitution for UVIWTAMO CBO's of SWM and Registration of certificate	i) Regular meeting with UVIWATAMO – CBOs Members														- Resources - Hiring expert trainers - Stationeries	13,546,000	- Researcher - Municipal safer coordinator -
3	To organize robbing, promote SWM partnership and budgets for Compost manure production scheme	Conduct meeting with identified prospective and support partners.														- Stationeries - Venue - Refreshment - Transport and fare	19,692,000	-Researcher -Municipal safer coordinator - UVIWA TAMO -
		ii) Writing concept papers for seeking funds														- task force/STC - writing material - refreshment - Venue - Fare and transport	15,000.000	- Researcher - Municipal safer coordinator
		iii)Monitoring of fund and activities														- Steering committee and taskforce	60,000,000	

No	Objective	Activities	IMPLEMENTATION SCHEDULE												Resources need	Estimates	Person responsible
			YEAR ONE				YEAR TWO				YEAR THREE						
			1	2	3	4	1	2	3	4	1	2	3	4			
		iv) Conduct evaluation meeting												- Steering committee and taskforce	30,000,000		
		GRAND TOTAL														225,122,00	

Source: Field Survey (2013)

4.3.1 Project Implementation Plan

The goals and objectives of the project are the framework and foundation of the project. The Project Implementation Plan is built on the project's goals and objectives. The project activities are designed with each activity attached to responsible persons, with set time – frame and available resources. These are the components of implementation plan whose objective is to plan, monitor, supervise, allocate resources and evaluate the accomplishment of the project activities.

4.3.2 Project Inputs

These are the inputs needed to be used in for the project to accomplish its set objectives. The inputs included human resources, funds, hours spent in the project activities which are all measurable. However, these project inputs are continuously being put in as the project is still going on.

4.3.3 Project Staffing Pattern

4.3.3.1 Implementation Partner

The following stakeholders will be crucial for the implementation of the project: Morogoro Municipal council, community policing groups, Police force department, and community. The project is currently managed by the CBOs leadership as; shown here under in the CBO's Structure.

4.3.3.2 Organization Structures

The project is currently managed by the CBO leadership .It is expected that once the project has grown there will be employments for he posts of Coordinator, Accountant, marketing Officer, Administrative officer and the Health and Environment Officer, which are currently vacant.

Table 28: Tentative Project Budget

OBJECTIVE	OUTPUT	ACTIVITIES	RESOURCES/INPUT	QUANTITY	UNIT PRICE	Sub TOTAL	Source of Fund
i)	(i) Voluntarily participation of CBOs in SWM initiatives in place	i) Awareness creation through CBOs meetings in 29 Wardst	- Human resource - Stationeries - Transport (hiring) - Refreshment - Training manuals'	- 7prsnx8daysx13st - Lumpsum (13 mitaa - Lumpsum (13 mitaa - Lumpsum13mitaa - Copy10 x13mitaa	20,000 500,000 200,000 2,000,000 100,000 Sub total	1,400,000 6,500,000 2,000,000 26,000,000 13,000,000 35,000,000	Researcher Community.
	ii) CBOs of SWM– registered as UVIWATAMO CBO in place	i) Constitutional development ii) CBO's Registration	- Consultation fee	1X2,000,000	2,000,000 Sub total	 2,000,000	Researcher Community.
	iii) Constitution for UVIWATAMO and registration certificate in place	iii) Leadership selection and staff recruitment iv) Training on CBOs Constitution preparation and registration certificates	- Qualified leader's	Lampsm13mtaa	3,068,000 4,000,000 Sub total	3,068,000 4,000,000 7,068,000	Researcher Community Police Municipal Safer City coordinator
	CBOs Leadership skills in place	i) Conduct Training on CBOs Leadership	- Stationeries - Hiring of trainers - Refreshment - Fare for participants - Venue fee	- Lampsm13mitaa - 8prs x 10dys - 0prsx13mitaa - 1x13mitaa	400,000 150,000 300,000 10,000 300,000 Sub total	5,200,000 12,000,000 3,900,000 5,200,000 3,900,000 30,200,000	Researcher Community Municipal Safer City Coordinator
Subtotal for Objective one						74,268,000	

OBJECTIVE	OUTPUT	ACTIVITIES	RESOURCES/INPUT	QUANTITY	UNIT PRICE	Sub TOTAL	Source of Fund
i)	i) Identified Prospective partners of S WM in place	i) Identification and Registration of prospective partners .	- Stationeries - Volunteers - Steering committee - Computer accessories for data base management - Transport and fare	- 7prsnx8daysx13st - Lumpsum (13 mitaa - Lumpsum (13 mitaa - Lumpsum13mitaa - Copy10 x13 mitaa	20,000 500,000 200,000 2,000,000 100,000	1,400,000 6,500,000 2,000,000 26,000,000 13,000,000	Researcher Community Municipal Safer City
				Sub total		35,000,000	
	ii)Awareness created to Prospective patinas and stakeholders SWM in place	i) Public events meeting with prospective partners	Stationeries	7prsnx6daysx13st	546,000		Researcher Community Municipal Safer City
		ii) Leaflets and placards produced distributed and posted	- Local media - video and cinema show - Stationary	3prsnx20000/x2x(13mita 3prsnx20,x2000 (13 mitaa 15Prsnx13mitaa	1,560,000 1,560,000 3,630,000		Researcher Community Municipal Safer City
		iii) Regular meeting with DHOs and SWCBOs leaders	- Community sensitisation workshop - Refreshment	- Stationeries - Hiring of trainers - Refreshment - Fare for participants - Venue fees	5,200,000 12,000,000 3,900,000 5,200,000 3,900,000		Researcher Community Municipal Safer City
				Sub total		30,000,000	
Subtotal for Objective two			-	-		72,296,000	

Source: Field Survey (2013)

The Coordinator will be overall responsible Staff overseeing the day to day activities of the NGO. Under the Coordinator there will be four supporting staff as outlined above. These will be salaried staff, depending on the financial position and strength of the NGO.

4.3.4 Project Budget

4.3.4.1 Inputs Requirement

The budget provides the financial framework for implementation; it reflects internal priorities of the project and different roles and responsibilities of the stakeholders. It draws a picture and specifies the contributions by sources, such as local government sources and beneficiaries' direct contribution. The Project is currently very minimal. Most of the activities are being done on a voluntary basis. In most cases the members make voluntary contributions to ensure attainment of the set objectives. It is provided in the CBO's constitution. When the CBO is in full operation then the Accountant will be responsible to write up the Project's Budget for implementation.

4.3.4.2 The Required Budget and Main Contributors

Table 29: Budget and Main Contributors

No.	Contributors	Expected % to be contributed	Estimated Budget	Real budget
1.	Researcher	2	5,664,130	5,000,000
2.	Municipal Council	17	48,145,105	-
3.	Centre Government	5	14,160,325	-
4.	Community CBOs	2	5,664,130	5,664,130
5.	Donors – Sought fund	74	209,572,810	-
	Total	100	283,206,500	10,664,130

Source: Field Survey (2013)

4.3.4.3 Training Methodology

This part involved the training methods used by facilitators to educate the CBO s members an building concepts on entrepreneur ship , business plan, Marketing skills, staff management in business. Further more. Providing Knowledge and skills on composite manure making and how to use it, as Financial generating source as well as consumption product in community at large .

Table 30: Training Manual (Topics and Sub Topics)

TOPICS	SUB TOPICS
Concept - building entrepreneurship culture	<ul style="list-style-type: none"> • What is entrepreneurship? Who is an entrepreneur? • Characteristics of successful entrepreneurs • Building entrepreneurship culture in your business • How to strengthen weak areas
Business plan and business ideas	<ul style="list-style-type: none"> • Having positive attitude • The business plan • Development of business idea • Testing the business idea (SWAC analysis) • Source of advice and assistance • Individual action plan
Marketing skills and plan	<ul style="list-style-type: none"> • What marketing is? • What market research is and how to do it? • Making marketing plans • How to satisfy customers? • Challenges of customers and how to handle them
Staff Management in business	<ul style="list-style-type: none"> • The importance of having human resource • Determining what staff you will need

	<ul style="list-style-type: none"> • How to employ staff and job distribution • Managing and evaluating staff performance • Motivating the staff • How to manage challenges and control staff
Record keeping	<ul style="list-style-type: none"> • Important of record keeping in business • Preparation of business accounts • Challenges and how to manage them
Costing	<ul style="list-style-type: none"> • What costing is? • Types of costs • Steps to follow in costing • Costing a product or service
Money management	<ul style="list-style-type: none"> • Money management, products and creditors • Sources of capitals and how to use then • Challenges of money management, products and creditors and how to solve them
Composite manual making	<ul style="list-style-type: none"> • What is composite manure • Steps 1-5 of composite garbage /solid waste materials • Time limits for the composite (to ready for use) • Management and usage of composite manure. • Animal manure (cattle, sheep and goats • Material not to be added to the composite pile.

Source: Field Survey (2013)

4.4 Project Implementation

Among the challenges faced by many project managers and sponsors of projects in Tanzania and the world over is to ensure that projects are completed according to the agreed schedule and plan (Namawata, 2007; cited by mlenge, 2012). Taking this into consideration, in order this particular project to be completed on time it was necessary that implementation be well planned and be carried out according to the

plans, schedules and other parameters as set out during preparation and needs assessment process. In this respect therefore project management was defined as getting the right project delivered on time and within budget framework.

At the beginning of the implementation stage ideally, a workshop were held in undertaken the study with those managing a project in order to clarify and reach an understanding on the national and the strategy of the project document.

- (i) Agreed resources were disbursed or procured.
- (ii) Studies technical assistance, works were contracted.
- (iii) Target groups received the planned benefits
- (iv) Monitoring was carried out and the implementation strategy was adjusted.

4.4.1 Project Implementation Reports

4.4.1.1 Objectives

In order to arrive where the project is now, a quite number of activities were implemented. Below are activities carried out from the needs identification to the implementation of the project step by step.

(i) Initial Meeting

This was a meeting held in April 2013 for the CED practitioner to introduce to the area, explain the purpose, plan how to go about, who will be involved and what will be the hosting organization. The meeting involved one person from local government authority, Coordinator from UVIWATAMO, development officer, students from

Sokoine University environmental department and CED practitioner from the Open University of Tanzania.

(ii) Preparation Meeting

The meeting was held at SUMO centre whereby, all Community based organizations were sensitized to attend the meeting. Other stakeholders such as religious and LGL leaders attended the meeting as well. The meeting was successful as after the initial meeting. A total of 60 members from solid waste groups attended the meeting that aimed at introducing the project, particularly the community needs assessment and it's goal. The meeting was effective whereas, key areas to be assessed were suggested; two days for needs assessment were proposed; one day for community needs assessment and the other one for the feedback and prioritization. Notably, people to be involved in the survey and focus group discussion were purposively and randomly selected. Time for the survey and focus group discussion was set respectively and the venue was proposed.

(iii) Development of Survey Tools

Tools for the community needs assessment were developed including structured questionnaire and guiding questions for focus group discussion. The questionnaire used to collect mostly quantitative information while guiding questions used to gather qualitative information. The tools were developed by the CED practitioner, and 2 CDO from Municipal office. Thereafter, the tools were pre-tested by asking 2 leaders from different SW Groups to fill the questionnaire informally and the gaps were corrected after the pre-test exercise.

(iv) Community Needs Assessment

The project implementation involved the CNA exercise, establishment and TOT team to train other members on solid waste management and project income generating skills and helped to make sure the objectives are achieved. For to be successful the assessment were involved people in a way that made the best use for all resources and works towards a realistic plan of action.

- (i) Reviewing the existing support
- (ii) Assessing the available resources
- (iii) Preparing the assessment team
- (iv) Deciding what information
- (v) Deciding what information is needs deeded
- (vi) Collecting the information
- (vii) Analyzing the information
- (viii) Reviewing the information with all needs assessment participant and
- (ix) Defining priorities and developing a plan of action.

4.4.2 Reviewing the Existing Support

The first step was to find out if participatory approaches were likely to succeed, we therefore carefully considered about the key questions such as

- (i) How stable the political situation is
- (ii) How much support there is for participation within our own organization(s)
- (iii) What can we do to strengthen the support and overcome barriers to participation
- (iv) Whether government and local authorities are promoting participation and providing support for it

- (v) What we can do to develop people's skills in facilitating CBOs of SW groups, in taking leadership and in helping members of **UVIWATAMO** to build their income, agreement and make decision.
- (vi) What national or local initiatives can be join up with to help support participation?

In conducting a needs assessment we conducted SWOT analysis to help people consider the situation in an organized way. This analysis helped us consider about building on our strength but also makes us aware of the opportunity we have for opportunities. In assessing the available resources we used participatory planning approach, to consider what resources are needed and how any shortfall in resources can be overcome. The most important resources included people, time, space and cost.

The next step in conducting a participatory need assessment was to build a team of key people from various professions and trades. The professionals in this team(s) were likely to be from different back grounds and experiences. The team(s) then got prepared to meet the two main aims of the assessment exercise. One was to generate the information needed to identify the priority needs from the point of view of the community members and to develop a plan of action to meet these needs. Secondly was to create opportunities for community members, particularly the poor and powerless, to gain skills and experience to make choices and act on plans about their future in respect to solid waste management. Deciding what information is needed was another factor we considered during the assessment. This helped us to decide what kind of information is needed to avoid collecting more information than is

necessary needed for planed study. Information collected had three important features:

- (i) Those based on needs in identified by the community Based Organizations,
- (ii) That build on information generated from documents, from colleague between professionals and community members, and from observation,
- (iii) Also it reflected the situation at a given point in time and recognizes that communities are rapidly changing.

Furthermore we considered on deciding how to get the information which useful and generated quickly, we started by talking to key informants whom were people in the community who, because of their position as formal or informal leaders, had information about community problems rather than individual problems. For this reason, they had been seen as representatives of a range of opinions that the community holds the information after being collected was analyzed using SPSS and then reviewing the information process was done with all needs assessment participants and we defined priorities and developed a plan of action.

4.4.3 Accomplished Objectives of the Project

- (i) The project has managed to accomplish the formation and registration of the CBO in the name of ‘Umoja wa Vikundi vya Wazoa Taka Morogoro (UVIWATAMO)’. The CBO is with registration number MG/MMC/CBO/000410 of September, 2014. The CBO has brought together various solid waste collection groups (CBOs) for them to work under one umbrella with legal recognition.

The Project also implemented an activity in which composting is taking place for sale. Over three tons of compost made by Kikundi cha Usafi wa Mazingira Mji mkuu (KIUM), Mawenzi, Mafiga were produced.

- (ii) It is evidenced that compost is a marketable subject to bulky production to assured availability coupled with awareness raising and promotion of use by farmers. The same activity has started a vegetable garden in which various vegetables and Nursery flower gardens are grown for sale at various places. This is an alternative income generating activity for the CBO to be strong.
- (iii) However, other activities in respect of objective 3.0 and 4.0 are still to be implemented given the fact that the same will easily be carried out once the service beneficiaries are well aware and perform their roles and capable on compost manure production

4.4.4 Un Accomplished Project Objectives

Since projects is planned for three years other CBOs are still not registered and they have not accomplished the expected goals of the project.

4.4.5 Limitations (Reasons for not Accomplishing the Objectives)

- (i) Time factor the project is planned for staff for three years and this is the second years.
- (ii) The project needs enough funds to be sustainable.
- (iii) Little awareness of the stake holders on issues of composting of the solid waste materials,

Table 31: Project Implementation Gantt Chart

Activities	IMPLEMENTATION SCHEDULE											
	YEAR ONE				YEAR TWO				YEAR THREE			
	1	2	3	4	1	2	3	4	1	2	3	4
Preparation of Community Needs Assessment												
Preparation of study plan, research tools and research presentation												
Collection of data												
Processing, analysis and presentation of data												
Awareness creation to CBOs of SWM												
Constitutional development and CBO's Registration												
Leadership selection and staff recruitment												
Training of UVIWATAMO leaders on managerial skills												
Regular meeting with stakeholders and CBOs leaders												
Conduct training on Compost manure production skills												
Conduct meeting with identified prospective and support partners.												
Writing concept papers for seeking funds												
Monitoring fund and activities												
Conduct evaluation meeting												
Project monitoring and evaluation												
Report writing and submission.												

Source: Field Survey, 2013

4.5 Summary

This section was based on the implementation of the project and it was concentrated in implementation of the activities according to the planned project requirements in details discussed about products and outputs, project planning process, project implementation plan, projects inputs and its requirement, project management and organization structures. Also project budget, project implementation, project implementation report and project implementation Gantt chart. The researcher had trained TOT, supervised the project and made sure that the community and CBOs members were registered in civil groups of SWM and the constitution for CBOs written and registration certificates obtained. Prospective partners had been identified, and institutional budgets taken care of in the SWM partners of compost manure production scheme.

CHAPTER FIVE

5.0 PARTICIPATORY MONITORING, EVALUATION AND SUSTAINABILITY

5.1 Introduction

Participatory Monitoring and Evaluation (PME) was planned ahead to enable continuously gather information needed to keep the project activities on schedule. There are problems when implementing projects. Hence, PME helped formulate solutions, measure progress and evaluate project success, thus helping stakeholders to measure progress off project activities. PME provided information which allowed appropriate adjustments to be made to the project implementation process.

5.2 Participatory Monitoring Process

This process was continuously carried out throughout the project implementation process. It was part of the project implementation. There was a systematic recording and periodic analysis of information that was chosen and recorded by the project insiders with the help of outsiders.

5.2.1 Why Monitoring?

Monitoring is part of the project implementation. In this project it was carried out by the researcher, NGO Leaders and Municipal Officials. It kept track of the project implementation, reporting on the progress towards the set goals and objective. It assisted in identifying what data to gather, when; whom to gather the data and its significance.

The monitoring process helped with information needed to analyze situations; identify problems and find solutions; discover trends and patterns; keep project activities on schedule; measure progress towards objectives and formulate and revise future goals and objectives and make decisions about human, financial, and material resources. Monitoring Research Methodology, thinking that the researcher has been paid for the work. To get 60 respondents was not an easy task and I find myself to be lucky. As for this exercise non-probability to questionnaires by giving in the information they had. It was also the convenient technique since the researcher was faced with resources constraints, including time and transport.

5.2.2 Monitoring Information System

The system of monitoring for plan implementation is usually developed from implementation schedules and action plans. The monitoring system should indicate at what point the monitoring task would take place. Relevant current project information which is accurate and systematically and periodically collected can raise the profile of the organization and increase awareness and can enable effective implementation of policies making. Informed decisions and guide the management on important issues such as effective policy planning prioritizing interventions, valuation of local resources efficient investment and engendering accountability.

Participatory monitoring methods used to engage the community in the monitoring. In connection with the development of monitoring mechanism, it is also necessary to specify the monitoring instruments that would be used in the monitoring process. In practice, several monitoring methods are implemented in execution of projects and is being carried out continues basis to check if the project implementation is going as

scheduled. It helps to identify problems and constants which crop up during implementation.

Moreover monitoring system is useful in making proper decisions and understands how such problems affect the smooth implementation of approved work plans and budgets. These feedback mechanisms ensure that problems are solved as they arise instead of waiting to review them at the end of the plan period. The methods applied in this projects included.

Both qualitative and quantitative methods of data collection using participatory assessment method (PA). This method being a qualitative research method involved a systematic consultation with the project partners and beneficiaries and other stakeholders for the purpose of obtaining their view on the planned or on-going project activities. A limited number of 100 persons (sample size) were drawn from the total population 1000 to fill in the structured questionnaires.

These included some government leader's community based Organizations of SWM groups and members of households and public and private institutions. The expectation was to extend the findings about the sample to the entire population. However the results obtained from the sample size adequately defined the whole population of the study area and the study was based on sample population which was the method within the reach of the researcher. The monitoring tools used included direct interviews, direct observations and pre-tested questionnaires. And the monitoring process was guided by the following questions and issues.

Whether the planned activities were done as per schedule? The resources budgeted being utilized effectively and efficiently as per plan? Were the staffs in their positions and on duty? And finally, was there a need for rescheduling. The answers to these questions were analyzed for appropriate decision-making and here under presents the projects monitoring report.

5.3 Validity and Reliability

In terms of validity and reliability of the data this was enhanced by the fact that the respondents were insured of confidentiality of the information they gave. This made them be open and free in giving answers to the questionnaires. Also the questionnaires were randomly distributed. This made it possible to get objective instead of subjective responses. On the other hand, the questionnaires were formulated out of focus group discussions, direct observations, direct and semi-structured interviews and group meetings. The results were then consolidated to come up with the structured questionnaire. This ensured validity and reliability of the data so collected.

5.4 Summary

It is obvious that PM was an essential activity for the purpose of tracking down the project's progress. It rendered the possibility of making adjustments as early as possible, while the project implementation was proceeding.

Fortunately, the project went on smoothly without a need for major adjustments. This was made possible due to the good relations among the project implementations and the project beneficiaries. This trend is expected to continue.

Table 32: Participatory Evaluation Plan

Intervention logic	Objectively Verifiable indicators	Means of verification (MOV)	Assumption
Goal/Overall objectives Enhanced SWMCBOs engaged into compost Manure production scheme	Enhanced SWM Groups initiative by 2015	<ul style="list-style-type: none"> - CBOs progress report - Division report - CBOs meetings and workshop report 	<ul style="list-style-type: none"> - Stakeholders participation - CBOs participation - Compost manure productions - Economic and political stability
Purpose/Immediate . To Promote SWM Groups into compost production scheme and mobilize members of UVIWATAMO to form Legally NGO/CBO	Increased number of participants(SWM Groups) engaged in to Compost manure production scheme from 3 to 15by 2015	<ul style="list-style-type: none"> - Ward progress report - CBOs report - CBOs meetings and workshop report 	<ul style="list-style-type: none"> - Relative security prevails - Stable community economic - Availability of funds
Output 2 Constitution for UVIWATAMO-CBO of SWM and Registration certificate in place	iii) Increased members of CBO's of SWM registered into UVIWATAMO by 50% by 2015 iv) Increased number of CBO's groups with leadership and management by 50% by 2015	<ul style="list-style-type: none"> - UVIWATAMO CBO's constitution - Certificate of registration - CBO's leadership - Minutes of committee meetings 	<ul style="list-style-type: none"> - Consistence and stable - Constitution - Availability of fund
Output 3 Prospective SWM partners and 3CBOsGroups for Compost manure production identified and budgets in place	i)Increased members of CBOs of SWM engaged into Compost manure production by 50% by 2015 ii)Increased number of prospective patinars of SWM from 2 to 15 by 2015 iii)Increased number of CBO's trained on Compost manure production skill from 3–15B by 2015	<ul style="list-style-type: none"> - Division report - SW groups registered as CBO's - CBOs activities report - Budgets - CompostmanureProduction schemes 	<ul style="list-style-type: none"> - Availability of funds from stake holders - Local Government - Central Government - Private partners - CBOs contribution

	Objectively Verifiable indicators	Means of verification (MOV)	Assumption
Output 2 Constitution for UVIWATAMO CBOs and Registration certificate in place	i) Increased member of CBO's of SMW engaged in Compost manure production from 3 to 12 by 2015 ii) Increased number of CBO's groups with leadership and management from to 12 by 2015 iii) Increased number of CBO's trained on SWM and Compost manure production and managerial skill from 3 – 12 by 2015	- CBO's constitution - Certificate of registration - Ward report - CBO's leadership - Minutes of committee meetings	- Availability of fund - Availability of labour - Availability of fund - Consistence and stable - Constitution - Availability of fund
Output 3 SWM Groups of Compost manure production and prospective partners identified and budgets in place	i) Increased number of SWM groups registered as Compost manure production groups associations and functioning from 3 – 12 groups by 2015	- Division, Wards and MHO report - CBOs of SWM groups registered as CBO's of Compost manure makers report - SWMG activities report - CBO's offices	- Availability of funds from stake holders - Local Government - Central Government - Private partners - Community contribution

Source: field Survey, 2013

Tasks/activities	Inputs	Monitoring indicator	Activity to output
i) Awareness creation to SWM CBOs	<ul style="list-style-type: none"> - Stationeries - Volunteers - Steering committee - Computer accessories for data base management - Transport and fare 	Number of CBOs ready to register as SWM Group for Compost manure production	Active participation of CBOs into SWM
ii) Constitutional development CBO's Registration	<ul style="list-style-type: none"> - Local media - Community Based Organization - stationary 	<ul style="list-style-type: none"> - Associations of SWM in action - Association offices in operation. 	Commitment of CBO's leaders
iii) Leadership selection and stuff recruitment	<ul style="list-style-type: none"> - Community sensitisation workshop - Funds for mobilization - Meeting - Community leadership - Refreshment 	<ul style="list-style-type: none"> - Active CBO's Leadership - Active CBOs group members 	Active participation by leaders
iv) Training of CBO members and Leaders on SWM compost and managerial skills	<ul style="list-style-type: none"> - Resources - Hiring expert trainers - Stationeries 	<ul style="list-style-type: none"> - Minutes report 	Willingness of CBOs leaders trained
v) Registration of SWM CBOs and Prospective partners identification	<ul style="list-style-type: none"> - Venue fee - Refreshment/LUNCH - Transport and fuel 	<ul style="list-style-type: none"> - Entrepreneurship skilled and active SWM CBOs group members 	Willingness of CBOs group to be registered Willingness of prospective partners to support
	<ul style="list-style-type: none"> - Fare for participants 	<ul style="list-style-type: none"> - Training reports 	

Tasks/activities	Inputs	Monitoring indicator	Activity to output
vi) Leaflets and placards produced distributed and posted	<ul style="list-style-type: none"> - task force/STC - writing material - refreshment - Venue - Fare and transport 	<ul style="list-style-type: none"> - Prospective and support partners Agreements. - meetings report - partners - MOU in operation - Correspondence 	<ul style="list-style-type: none"> - Commitment of taskforce and partner to facilitate the production of leaflets and placards
vii) Regular meeting with SWM CBOs leaders .	<ul style="list-style-type: none"> - task force/STC - writing material - refreshment - Venue - Fare and transport 	Concept papers report	<ul style="list-style-type: none"> - Willingness of CBOs and Municipal leaders to attend the regular meetings
viii) Conduct training on SWM and Compost manure making	<ul style="list-style-type: none"> - Refreshment/lunch - Transport and fuel - Fare for participants 	<ul style="list-style-type: none"> - Training session in progress. - Training manual - Active participants' - Active projects in progress 	-Willingness of SWM CBOs members to be trained on Compost manure production
ix) Conduct meeting with identified prospective and support partners.	<ul style="list-style-type: none"> - Stationeries - Venue - Refreshment - Transport and fee 	<ul style="list-style-type: none"> - Progress report - Minutes reports - Supporting fund report 	-Willingness of prospective and support partners to attend meeting and support

x)	Writing concept papers for seeking funds	<ul style="list-style-type: none"> - Taskforce/STC - Writing material - Refreshment - Venue - Fare and transport 	<ul style="list-style-type: none"> - Concept paper in progress 	-Commitment CBOs leaders and taskforce in writing concept paper
xi)	Monitoring fund and activities	Steering committee and taskforce	<ul style="list-style-type: none"> - Morogoro Division monitoring progress report - Community policing groups report 	<ul style="list-style-type: none"> -Willingness of SWM CBOs members to be monitored -Commitment of stakeholder to participate
xii)	Conduct evaluation meeting	Steering committee and taskforce	<ul style="list-style-type: none"> -Morogoro Division Evaluation progress report - SWM CBOs groups report 	<ul style="list-style-type: none"> Members of SWM CBOs engaged in compost manure production. be evaluated Commitment of stakeholder to participate

Source: Field Survey (2013)

5.4.1 Performance Indicators of Participatory Monitoring Methods

Indicators are signs or variables that show the extent of change that resulted from project. Helps to measure what actually happen in terms of quality quantity and timelines against what was planed. They measure progress in achieving output and outcomes. Indicators show relevance, performance and effectiveness of a projects as well as progress towards meeting its outputs or outcomes.

- (i) Relevance – do the results meet the expectations and needs of stakeholders?
Are the results valid and pertinent to the overall goals?
- (ii) Performance (effectiveness) – what progress is being made towards outcomes?
Are these the right actions for achieving the outcomes; is this the right strategy to follow? Are the outputs delivered in timely fashion?
- (iii) Progress what changes have occurred? Is there a plausible association between the changes and project outputs?

Do the outputs lead to the expected positive changes or out-comes. Formulation of performance indicators were established at the project formulation stage by stakeholders and project management on the basic of the key project variable targeted in the project matrix (work-plans). These variables were related to project activities, inputs, outputs or methods of implementation.

5.4.2 Participatory Evaluation Methods

Methods of data collection used in evaluation were primary source o data include interviews, observations, focus group discussions, semi-structured interviews, and questionnaires. In addition the secondary source of data which include review of

existing literature which may include project records, baseline data and any other records or documentation about the place, people or problems involved in the project and other related material.

5.4.2.1 View of Project Report

The evaluation exercise was guided by the project objectives. The evaluation reviewed the project reports obtained from the monitoring information system basing on the very specific area.

5.4.2.2 Focus Group Discussion

A small group of people (6 – 12) selected from CBOs of SWM in Morogoro Municipal Division and other stakeholders with specialist knowledge or interest in a particular project (SWM) were invited to discuss special topics related to project performance in detail and assessed the progress of the project in comparison to the intended objectives. A researcher chosen to keep the discussion on participatory way to avoid individual dominating the discussion.

5.4.2.3 Findings Data and Analysis and Presentation

The researcher collected the data and analyzed the same for qualitative as well as quantitative results. The findings have revealed that the project was implemented according to the plan and it has achieved the desired results.

5.4.3 Project Evaluation Summary

Evaluation was done successfully because the exercise was participatory and clear commitment from all parties involved, and atmosphere of openness and a willingness

to share and value each others' opinions and capabilities. The implication of the evaluation results from periodic and mid-term evaluation show that the project was going on well. The community and stakeholders are aware of their role and responsibility of participating in SWM.

5.4.3.1 Performance Indicators

Indicators are signs or variables that show the extent of change that resulted from project. Helps to measure what actually happen in terms of quality quantity and timelines against what was planed. They measure progress in achieving output and outcomes. Indicators show relevance, performance and effectiveness of a projects as well as progress towards meeting its outputs or outcomes.

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Methods of data collection used in evaluation were primary source o data include interviews, observations, focus group discussions, semi-structured interviews, and questionnaires. In addition the secondary source of data which include review of existing literature which may include project records, baseline data and any other records or documentation about the place, people or problems involved in the project and other related material.

5.4.2.3 View of Project Report

The evaluation exercise was guided by the project objectives. Te evaluation reviewed the project reports obtained from the monitoring information system basing on the very specific area.

5.4.2.4 Focus Group Discussion

A small group of people (6 – 12) selected from Chamwino ward and other stakeholders with specialist knowledge or interest in a particular project (Community Policing) were invited to discuss special topics related to project performance in detail and assessed the progress of the project in comparison to the intended objectives. A researcher chosen to keep the discussion on participatory community need assessment and to stop on individual dominating the discussion.

5.4.2.5 Findings Data and Analysis and Presentation

The researcher collected the data and analyzed the same for qualitative as well as quantitative results. The findings have revealed that the project was implemented according to the plan and it has achieved the desired results.

5.4.2.6 Project Evaluation Summary

The evaluation was done successfully because the exercise was participatory and clear commitment from all parties involved, and atmosphere of openness and a willingness to share and value each others' opinions and capabilities. The implication of the evaluation results from periodic and mid-term evaluation show that the project was going on well. The community and stakeholders are aware of their role and responsibility of participating in community policing practices. However, there were still additional inputs needed from the ward leaders to enforce all the community members of the streets to participate fully in policing practices, although some of the leaders safe-guard their political positions by not using the laid down by-laws for fear of not being re-elected.

5.5 Project Sustainability

The establishment of sustainable projects is essential. Sustainability refers to the ability of development projects to sustain itself both throughout the life of the projects and into the future beyond the hand over period (Khan, 2003). When project benefits can be maintained over a long period of time, they are likely to increase the impact on communities' involvement. Whether a project has achieved sustainability or not, can only be seen after the donor assistance ends and the project has been handled over to local stakeholders such as the benefiting community, government or the private sector.

A sense of ownership inclusion of government officials and other local project stakeholders as well as intensified efforts to mobilize the domestic resources and strengthen the financial sustainability, using local systems and mutually agreed

standards are necessary for sustainability. Sustainability relates to how a project ensures its capacity to function regardless of changes in external resources. This section of the project report indicates the provision made for the project's long-term sustainability. The aim was to identify circumstances that may have affected the host community and the viability of the project in future. Sustainability of this project is based mainly on institutional, financial and political aspects.

5.5.1 Sustainability Elements

The sustainability elements were concerned with sustainable development and strategic planning and management. This project is a result of participatory needs assessment in the community since the members were involved in all stages of the projects and thus it has built a sense of ownership. On the other hand the project supplements the policies of the Tanzania Government to improve the economy of its people, in this case meet the "political will" and leaders commitments.

5.5.2 Sustainable Development

The project aim at Sustainable development economically socially, politically and environmentally through association building, which culminated into the registration of the CBOs. Community Governance in Community policing has been enhanced. PPP is in place and the community members are increasingly registered as CBOs policing group sand participate fully in policing activities practices.

Moreover a number of income generating projects have been initiated among the community policing members for them to sustain and will enable the CBOs of community policing and its members have an increase in income. This will uplift

their stand of living and the members would be able to attend to their economic and social needs. The Private – Public – Partnership will promote networking with other Community Policing System Stakeholders, Including the National Strategy on Urban Crime Prevention for some important collaboration, at the national level, and the safer cities initiatives at Regional and local level in Collaboration with International Development Partners.

5.5.3 Strategies Planning and Management Sustainability

A sustainability plan is both a guidance document as well as the foundation for a report in system. A good plan enables the organization to coordinate efforts, track progress and focus energies on the highest priority activities. The project was highly supported by the police department under the community policing desk, Municipal Safer City under the SUMO program, the Morogoro Municipal Council, the ward and street leaders.

On the other hand Community policing members and stakeholders has been involved in formulating the sustainability plan. This rationale established the justification for the commitment of resources. The community is willing to change and assume their role and responsibility of participating fully in community policing governance and practice since they are now assured of working under good community Governance with legally registered CBOs in this project, the sustainability plan will include institutional sustainability, financial sustainability and political sustainability as narrated here with.

The staff of the Association headed by the Association Coordinator is to be a team of fully qualified professionals of providing quality services and further developing

such services. The staff will be openly recruited from the open market for purpose of achieving management sustainability.

5.5.3.1 Institutional Sustainability

Institutional Sustainability has three main components, namely Developmental sustainability, management sustainability and financial sustainability according to the CED principles, this project has empowered Community Policing group members of Chamwino ward in realizing their potentials and uses them in a sustainable way to improve their practices and service delivery. As stipulated in the National Strategy on Urban Crime prevention in Tanzania Communities have the largest responsibility in implementing local crime prevention initiatives from the design to the implementation, monitoring and review of crime prevention activities.

- (i) Development sustainability plan elected and appointed leaders at the ward and “mtaa” level will take responsibility for community mobilization and for all community based crime prevention initiatives, including community policing, community resources, mobilization and implementation of income generating projects. NGOs and CBOs will be engaged to organized communities and sensitize members on their roles and responsibilities, while communities apart from involved in the design and implementation, and in monitoring and review of crime prevention activities also have the responsibilities;
- (ii) To contribute resources and actively undertake neighbour watch activities.
- (iii) To constitute participatory community policing terms and “Sungusungu” groups and contribute a sources to facilitate Community policing and 119 neighbour watch activities.

- (iv) Reporting on incidences of Crime, or suspicious issues which is a statutory obligation, and
- (v) Ensuring maintenance Infrastructure and services by preventing Vandalism.

5.5.3.2 Management Sustainability Plan

Project management can be simplistically stated to be gating the right project delivered on time and within budget. For practical application, the nature of the project in question needs to be fully understood and the activities involved in bringing it to fruition established in great detail. The staff of the Association, headed by the Association Coordinator is to be a team of fully qualified professionals capable of providing quality services and further developing such services. The staff will be openly recruited from the open market for the purpose of achieving management sustainability.

5.5.3.3 Financial Sustainability Plan

Before embarking on the actual project implementation, it has always been advisable for the project management to know in detail the magnitude and scope of the work to be undertaken. There are a number of issues which would be necessary for the project management to focus upon including financial planning aspect of the formulation of the project.

The main interest would be emphasised on the profile of the project cost and benefits, the sources and application of funds; the timing of investment and staging, the scale of operation the choices of technology and the interrelationship between

components. Financial Sustainability here means that, project needs to become financially stable and independent from donor agencies which limit the duration of the project. A project is more likely to be sustainable if financial resources can be found which ensures that the project can be continued. Projects are usually only funded for a few months or years. Many of them cannot be continued without funding from International development assistance organizations.

In terms of sustainability it is, therefore, important to find other financial mechanisms, such as 'buy –in' by government or private companies (structured market) self-financing mechanisms are the most effective in order to enhance sustainability. However this may be problematic due to the character of the intervention (poverty alleviation) and the target group/participants (Low Income Individual and Communities).

5.5.3.4 Social and Political Sustainability

Absorption on the projects activities in to the government's budgetary mechanism has shown good results. Never the less many founders are not in support of this approach. They prefer not to contribute direct to the government budget. A project is more likely to be sustainable if it has a long term vision. That needs to be communicated to all stakeholders, who can then align their resources (Sabine, 2008).

The society has to accept the project as well as the political leaders. This will be assured through participatory approach so that the society (community) and politicians support the projects hence, assurance to social and political sustainability.

The projects sustainability plan is shown in table 5.4 here under

Table 6: Project Sustainability Plan

Sustainability Area	Important Areas	Methodology/ Activity	Sustainability parameters	Sustainable indicators
Developmental Sustainability	<ul style="list-style-type: none"> • Name of the Association • Legal form of the Association • Date of Registration • Mission Statement • Vision Statement • Board Constitution • Leadership Structure • Target Groups 	<ul style="list-style-type: none"> • Interim Association Formation Committee • Democratic election 	Financial indicators	<ul style="list-style-type: none"> • There are efforts to approach national and international donors for financial support • The project is supported by various stakeholders including the Morogoro Municipal Council authorities.
Management Sustainability	<ul style="list-style-type: none"> • Organization Structure • Mode of Appointing CEO • How many, by percentage are local staffs • Professional background of CEO 	<ul style="list-style-type: none"> • Open market staff recruitment 	Institutional indicators	<ul style="list-style-type: none"> • It has got its vision, mission and value clearly set and defined • There are efforts to develop technical competence among its members and the would-be staff • There is a set of institutional evaluation systems • There are performance reviews being conducted and • There is flexibility, taking into consideration the changing internal and external environments.
Financial Sustainability	<ul style="list-style-type: none"> • Sources of funds (members' contributions) • Loans; • Donor 	<ul style="list-style-type: none"> • Financial Analysis • Budgets 	Political indicators	<ul style="list-style-type: none"> • The project is supported by the local government leadership • There is also community support and participation

Sustainability Area	Important Areas	Methodology/ Activity	Sustainability parameters	Sustainable indicators
	<ul style="list-style-type: none"> • Others • Uses of funds 			<ul style="list-style-type: none"> • The project complements and supplements the country's policies on SWM • There is room for networking and collaborating with other organizations • There is room for lobbying for the project's causes • There is room for holding advocacy meeting and publicizing project activities.
Social and Political Sustainability	<ul style="list-style-type: none"> • Social Support • Political Support • Governmental Support 	<ul style="list-style-type: none"> • Meeting • Interviews • Observations 	Leadership indicators	<ul style="list-style-type: none"> • The CBOs have got a legally elected leadership • All members have the right to elect and be elected in any leadership position • Leaders' roles and responsibilities are well stipulated in the CBO's constitution • There are leadership codes of conduct in place.
			Training indicators	<ul style="list-style-type: none"> • The project has a training program in place • Study visits to other municipalities are also in progress • Visits to international organizations, in particular ILO are planned.

Source: Field Survey (2013)

5.5.3.5 Sustainability Indicators

Project sustainability refers to the capacity of a project to continue functioning, supported by its own resources (human, material and financial) even when external sources of funding have ended. The Projects is interested in sustainability to confirm its continuity. The following sustainability indicators were considered: Financial indicators, Institution indicators, Political indicators, Leadership Indicators and Training indicators.

5.6 Summary

When talking about project sustainability it is also important to talk about other related issues. These include the issues of SWOT analysis, gender, environmental issues Community Governance issues, and community owner ship. However, as for this project Sustainability is assured due to the fact that there is an active Participation of the Community and other Stakeholders as a result of good community policing governance, the need of making Morogoro Municipality safer and free from Crime and Violence. This urge motivated everyone to be active in the project.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter summarizes the whole research process and finally it provides major conclusions from the results of the study and offers recommendations based on the findings. The presentation of the conclusion tries to answer the specific objectives and research questions raised in chapter one. Specifically this section reflects on the findings from the participatory assessment, literature review, project implementation, monitoring and evaluation, sustainability issues and finally the recommendation.

6.2 Conclusion

The objective of the study was to assess the role of community Based Organizations initiatives engaged in solid waste management in Morogoro Urban Division. The interactions between the four issues of community Demographic information, Social economic initiatives of Community Based Organizations of SWM, stumbling blocks to Community Based Organizations of solid waste management and description of governance role`s on community social economic initiatives sustainability has been determined.

The findings revealed a number of challenges that need to be addressed. That is, Poor garbage collection, Low organizational capacity of CBOs, (most of CBOs were not registered), Inadequate safety and security for CBO workers: no protective gears, gloves and boots or any social security provided. Workers frequently get injured and or fall sick and are marginalized by community, Inadequate collection and transport

facilities (few skip buckets, SUMO skip bucket decline from 68 to about 10 only), fewer operational MMC trucks and no payment of fees by waste sources. Furthermore the study revealed that Waste handling involves activities associated with management of wastes until they are placed in storage containers for collection.

It also encompasses movement of loaded containers to point of collection. Storage refers stock up of wastes as soon as they are generated hence; there are two types of storage activities at source. The first one is temporary storage done at household level as a part of their hygiene. The second type is communal solid waste storage system on public solid waste containers prepared by municipality.

While processing at source involves activities such as waste composting and separation of solid wastes for reuse and recycling. All of these components were seen as important as for protection of public health. The participatory Needs Assessment (PNA) came up with the problem statement which necessitated the implementation of the project with aim to asses to what extent challenges encountered of unmanaged waste by the Municipality can be reduced to the minimum through promotion of CBOs initiatives of SWM engaged in Composts manure making in most environmental friendly way however Concerted efforts were required to Operation analyze the M SWM.

The project proposed by the targeted beneficiaries groups was on Enhancing Community Based Organizations Initiatives engaged in solid waste management and compost manure scheme in Morogoro municipality. The Project report briefly provides the insight of the organizational capacities, operational modalities, existing

potential benefits, challenges of SWM, available opportunities and suggestions on way forward. The project has achieved its objectives. The involvement of the stakeholders ensured attainment of the project goal. Community Based Organizations of SWM was to be promoted and enhanced through awareness creation and mobilization of community Based groups of SW to be registered legally.

This was important since SWM Groups at addressing local public safety problems of Solid waste Disorders and make organization changes to support these efforts through community partnership, problem solving and organization transformation. Hence these elements are expressed through principles of community Governance such as leadership, vision, equality trust empowerment, service and accountability.

These organizational changes have transformed three CBOs of SWM Groups and some achievements have been realized in the following areas “Support of funding and economic productivity, and employment creation for the promotion of community based Organization initiatives. The realized achievement requires sustainable of SWM Groups systems, which are adapted to and carried by Municipal and its local communities. The project sought to empower and promote the formed UVIWATAMO to engage in SWM practices activities particularly in a decentralized composting scheme which realize the expected project results.

6.3 Recommendations

The recommendations provided here are based on the results and discussions from the specific objectives. It should be noted that these recommendations recognize the workability of the participatory assessment. Project design and implementation as

applied in this project. Community participation stakeholders involved on monitoring helped a lot in the successful implementation of this project. The implementation of the project revealed that the project/study is achievable.

It is recommended for implementation in other wards within Morogoro Municipality and other municipalities and cities in Tanzania. In light of experiences gained as a result of the project implementation is recommended, that in order to sustain the project implementation the following areas should be put into consideration. As steps to further advance to the similar projects.

6.3.1 Education Related Measures

The residents of Morogoro town have low awareness and knowledge about solid waste management issues. This clearly indicates the need of wider public awareness creation activities. So that the CBOs leadership as well as health office of the Morogoro Municipal council should deliver adequate training and awareness creation to residents about side effects of solid waste, and application of sustainable solid waste management practices. In this case, there is a need to give special attention to youth and women who are the most powerful change agent.

6.3.2 Institution Related Measures

- (i) The Municipal Management should give priority to fulfill infrastructure facilities i.e. place back the public solid waste containers and introduce dust bins with a close supervision, frequent emptying of waste and even distribution.

- (ii) Organize efficient controlling mechanism and sanitation agent to prevent illegal solid waste disposal, Improve solid waste collection by preparing permanent programmes, increasing the number of collection trucks, by employing other methods of collection like block and curbside collections methods, control supervision field workers and community based organization of solid waste management.

6.3.3 Stakeholder Related Measures

- (i) Municipal council should open its door to private sectors and also ensure their involvement in planning and implementation of municipal solid waste management activities.
- (ii) Promote and initiate communities and different CBOs of the town to involve in solid waste management. In addition organize voluntary groups that work on MSWM through giving different incentives and providing necessary equipments that used for solid waste management and create interaction with NGOs/CBOs and donor agencies and watch these bodies as partner for delivery of MSWM, because they are one means's to get financial support for purchasing different solid waste management facilities, managerial and technical skill building trainings. In addition, they can also provide awareness rising and skill building support to community based groups (youth, and women), informal sectors, formal sectors, and also to the Municipal council itself.

- (iii) Recognizing and encouraging the emerging role of handcrafts through reduction of taxes, and by providing space and equipments to produce recycled materials and creation of market for it.

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APPENDICES

Appendix 1: Questionnaires for Participatory Needs Assessment

PART A:

GENERAL INFORMATION

Name of region : Morogoro

Name of district : Morogoro

Name of division : Morogoro Municipal

Name of ward :amlet / street.....

Introduction:

I want to express my sincere thanks to you (respondent) for your readiness to spare some few minutes to respond to questions on this questionnaire. This questionnaire intends to collect information to be used solely for academic purpose. That is, to be used in the study to assess the role of Community based organization (CBOs) engaged in solid waste management in morogoro municipality. Any information that will be collected will be treated with great confidentiality and strictly used for the purpose intended.

PERSONAL PROFILE:

1. Date of interview.....
2. Gender: female ☐
Male ☐
3. Age;

- (a) Below 18 years old ☐
- (b) 18 – 25 years old ☐
- (c) 26 – 35 years old ☐
- (d) 36 – 45 years old ☐
- (e) 46 – 55 years old ☐
- (f) 56 – 65 years old ☐
- (g) 66 – 75 years old ☐

4. For how long have you been in this place?.....

5. Marital status:

- (a) Single ☐
- (b) Married ☐
- (c) Widow/widower ☐
- (d) Divorced ☐
- (e) Separated ☐

6. Education:

- (a) No formal education ☐
- (b) Primary school education ☐
- (c) Secondary school education ☐
- (d) Post secondary school education ☐
- (e) Other (Specify).....

7. Employment:

- (a) Self employed ☐
- (b) Unemployed ☐
- (c) Retired

(d) Please specify your former employer,.....

(e) Employed

8. Family size:

a) One member

d) two members

b) Three members

e) four members

c) Five members

f) more than five

9. Source of income:

a) (i) farming

(ii) fishing

b) (iii) small business

(iv) worker (employed)

c) (v) farming + small business

PART B

SOCIAL ECONOMIC ACTIVITIES ASSESSMENT:

(i) What are the social economic activities initiatives of the community based organizations engaged in solid waste management in the study area?

10. What kind of business/economic activities are dominant in the community?

(a) agriculture ☐ (b) livestock keeping ☐

(c) industrial activities ☐ (d) retail and wholesale trade ☐

(e) hotels, bars and guest houses ☐

11. What is the main source of solid waste in the community?

(a) Residential houses ☐ (b) offices and businesses ☐

(c) Hotels, bars and guest house ☐

12. Is housing well planned?

Yes ☐

No ☐

PART C;**COMMUNITY BASED ORGANIZATIONS INITIATIVES AND
MENAGEMENT**

ii) What are the factors that affecting the community based organizations initiatives of solid waste management .

13 .what is the name of your solid waste group?.....

14.is it registered? Yes.....no.....

If yes is it registered as what? I) n g o ii)

Number of registration.....

When it was registered.....

15. What are the major activities of your group?

I).....ii).....iii).....

16.do you have adequate safety security for workers eg protective gears?

Yes.....no.....

17. Is your solid waste group a member of uviwatamo? Yes.....no.....

If yes what is the role of uviwatamo ?

18. Leaders of uviwatamo have adequate leadership and financial management skills.

Yesno.....

19. Have you ever attended any training/meeting on solid waste management .

Yes

No.

20. Have you noticed any gain / benefit as a result of forming uviwatamo

Groups in your community / street / am let / area?

Yes ☐No. ☐

If yes what are those benefits?.....

21. Is the council do support the cbos /ngos or groups engaged in solid waste management? Yes ☐ No ☐

If yes how?

22. Is your CBO/NGO is given any support from government or financial institution? ☐ Yes. ☐ No

If yes what kind of support.....

23. Is the payment arrangement legally binding Yes ☐ No ☐

24. What is the best way of treating solid waste?

(a) Re – use ☐ (b) re – cycle ☐ (c) compost ☐

25. Is the current transportation of solid waste good? Yes ☐ No ☐

26. Are the solid waste dumps adequate? Yes ☐ No ☐

27. Are the solid waste collection tools proper? Yes ☐ No ☐

28. Is the current solid waste collection arrangement proper?

Yes ☐ No ☐

29. Are the current laws on solid waste collection adequate?

Yes ☐ no ☐

30. What should be done to improve financial services in the solid waste collection?

activities?.....

31 .what other socio-economic activities that are undertaken by members of

UVIWATAMO group?

i)

ii)

32. Have you ever heard about partnership management of social services partnering community based organization engaged in solid waste management

33. How many times? (Frequencies)

34. At which level was it organized?

(1) At council level

(2) At mtaa level

(3) At ward level

(4) Others (please specify)

35. Who organized the training /meeting?

(1) Council leadership

(2) Mtaa leadership

(3) Ward leadership

(4) Others (please specify)

36. What was the contents of the training/meeting in relation to solid waste management?

PART D:**COMMUNITY BASED ORGANIZATIONS SUSTAINABILITY**

iii .what is the role of local government leadership upon the Community based organizations sustainability engaged in solid waste management?

37. What are the roles of municipal leaders in solid waste management?

.....

.....

38. What are the roles of Municipal Leaders to CBOs of solid waste management?

1)

2)

3)

4)

39. What is the condition of the environment? (a) Good (b) bad

Is solid waste being handled responsibly Yes ☐ No ☐

40. Is there any future in solid waste collection? Yes ☐ No ☐

41. **What are the sources of your capital for your business?**

(a) Individual (b) loan (c) grants (d) individual & loan (f) n/a

42 .what should be done by the municipal council to improve community based

Organization engaged in solid waste management activities?

.....

.....

43. What are the challenges encountered in your CBO/NGO? **(Tick where applicable)**

(a) Lack of support from lga []

(b) Lack of capital []

(c) Lack of entrepreneurship knowledge and skills []

(d) Low household income []

(e) (e)low level community awareness []

(f) lack of enforcement []

Others, specify


.....

.....

.....

.....

Appendix 2: Introduction Letter

<p>The Open University of Tanzania Morogoro Regional Centre Bima Building P.O. Box 2062 Tel.No: 023 2613303 Fax: 023 2614052 MOROGORO, TANZANIA</p>		<p>Chuo Kikuu Huria cha Tanzania Kituo cha Morogoro Jengo la Bima S.L. Posta 2062 Simu Na. 023 2613303 Fax: 023 2614052 MOROGORO, TANZANIA</p>
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15 February 2013

Ref. No: OUT/MOR/Ad/Vol.1/41

RAS MOROGORO
Box 650
MOROGORO
.....

Re: Introduction of MS/Mr. RAMADHAN M. MGAWE as an active student at Morogoro Regional Centre



I write to introduce the above named individual who is a student of the Open University of Tanzania studying at Morogoro Regional Centre.

The student's particulars are as follows;

1. Programme of Study: M-CED (MASTERS OF COMMUNITY ECONOMIC DEVELOPMENT)
2. Year of Study: DISSERTATION STAGE
3. Registration Number: HD/A/033/T-11

I would appreciate if you could kindly accord the necessary assistance to the student.

With kindest regards,

Dr. Massomo, SMS
Director Morogoro Regional Centre

Cell: 0754 657 808 | Email: drcmorogoro@out.ac.tz; smsmassomo@yahoo.com

Appendix 3: Research Permit Letter

THE UNITED REPUBLIC OF TANZANIA
PRIME MINISTER'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

Telegraphic Address: "REGCOM"

Phones: 023 2 60 42 37/2 60 42 27

Fax No: 2 60 1000

In Reply please quote:



Regional Commissioner's Office,
P.O. Box 650,
MOROGORO.

Ref. No. AB.175/245/OI/129

18th July, 2013

District Administrative Secretary,
Morogoro.

RE: RESEARCH PERMIT

Please, refer to the above heading.

I have great honour to introduce to you **Mr. Ramadhan M. Mgawe** who is the MCED student at the Open University of Tanzania who is at the moment conducting research in our region.

The title of research is "Enhancing Community Based Organisations Initiatives Engaged in Solid Waste Management in Morogoro Municipality"

The permit is granted from July, 2013 to August, 2013.

Please accord him with all support to enable him accomplish this important research activity.


D. J Ndomba

For: REGIONAL ADMINISTRATIVE SECRETARY

✓ Copy to: Mr. Ramadhan M. Mgawe
Student

Appendix 4: Kibali cha Kufanya Utafiti

**JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA WAZIRI MKUU
TAWALA ZA MIKOA NA SERIKALI ZA MITAA**

Anuani ya Simu: MKUU WA WILAYA
SIMU NAMBARI: 2614096
FAX NAMBARI: 2613848



OFISI YA MKUU WA WILAYA,
WILAYA YA MOROGORO,
S.L.P 681,
MOROGORO.

Unapojibu Tafadhali taja:

Kumb .Na. AB.210/249/01/191

Tarehe: 18 Julai , 2013

1. Mkurugenzi,
Halmashauri ya Manispaa,
S.L.P 166,
MOROGORO.
2. Mkurugenzi Mtendaji,
Halmashauri ya Wilaya,
S.L.P 1880,
MOROGORO.

Yah: KIBALI CHA KUFANYA UTAFITI


Tafadhali husika na somo la habari.

Kibali kimetolewa kwa Bwana Ramadhan M. Mgawe ili aweze kufanya utafiti katika Mkoa wa Morogoro..

Kiini cha utafiti huu ni "Enhancing Community Based Organisations Initiatives Engaged in Solid Waste Management in Morogoro Municipality."

Kibali hiki ni cha mwezi mmoja kuanzia Julai, 2013 hadi Agost, 2013.

Naomba apewe ushirikiano mtafiti huyo.


Tamary P. Isike
Kny: KATIBU TAWALA WILAYA
MOROGORO

Nakala: Bwana Ramadhani M. Mgawe
MTAFITI

TPI/GPM

Appendix 5: Kibali cha Kufanya Utafiti

HALMASHAURI YA MANISPAA MOROGORO

Simu/Nukushi Na: 023 – 2614727

Barua Pepe: info@morogoromc.go.tz

Tovuti: www.morogoro.go.tz

Unapojibu taja:

Kumb. Na. **E.10/MMC-78/VOL.II/35**



Ofisi ya Mkurugenzi wa Manispaa,
S.L.P. 166,
MOROGORO
TANZANIA

Tarehe: **23 Julai, 2013**

Maafisa Watendaji wa Kata,
Halmashauri ya Manispaa ya Morogoro,
S.L.P. 166,
MOROGORO

YAH: KIBALI CHA KUFANYA UTAFITI

Husikeni na kichwa cha habari cha hapo juu.

Napenda kuwatambulisha kwenu Ndg. Ramadhan M. Mgawe ambae anafanya utafiti katika suala la **'Enhancing Community Based Organisations Initiatives Engaged in Solid Waste Management in Morogoro Municipality'** katika kata zote za Manispaa kuanzia Julai, 2013 hadi Agosti, 2013.

Natumaini mtawapa ushirikiano ili kukamilisha utafiti wao.

M.R. Mkongwa

M.R. Mkongwa

**Kny: MKURUGENZI WA MANISPAA
MOROGORO**

Nakala: Ramadhan M. Mgawe

Barua zote ziandikwe kwa Mkurugenzi wa Manispaa, Morogoro

Appendix 6: Cheti cha Kufanya Usaili

HALMASHAURI YA MANISPAA MOROGORO



CHETI CHA USAJILI CBO

Umaja wa Vikundi vya Wazoataka Morogoro (UWIWATAMA) ni kikundi cha Jamii cha Hiari (CBO) kilichopo Mtaa wa Boma Road Kata ya Mji Mkuu, Manispaa Morogoro, Mkoa wa Morogoro, kinachohendesha shughuli za *Kiuchumi na Kijamii*. *Kikundi Kimesajiliwa* rasmi tarehe **18 Mwezi Septemba, Mwaka 2014**.

Namba ya Usajili **MG/MMC/CBO/000410**.

MB

AFISA MAENDELEO NA USTAWI WA JAMII,
MANISPAA MOROGORO.
MAENDELEO YA JAMII
YA MANISPAA
MOROGORO

Mkurugenzi

MIKURUGENZI WA MANISPAA,
MOROGORO

Appendix 7: Takwim za Taka Ngumu

TAKWIM ZA TAKA NGUMU – MANISPAA YA MOROGORO (2011-2014).

	2011	2012	2013	2014
IDADI YA TAKA ZINAZOZALISHWA KWA SIKU	261T	265T	272T	290T
UWEZO WA KUKUSANYA TAKA KWA SIKU.	118.4T	204.1T	235T	251T
GHARAMA YA MAFUTA YA MAGARI	135,096,000 TShs.	135,096,000 TShs.	135,096,000 TShs.	135,096,000 TShs.
IDADI YA MAGARI YA KUBEBA TAKA	5	6	5	5
ENEO LINALOZALISHA TAKA KWA WINGI.	Soko kuu	Soko kuu	Soko kuu	Soko kuu
IDADI YA SKIPMASTERS	3	3	3	3
IDADI YA LITTER BINS BARABARANI	20	20	16	5
IDADI YA BUCKETS ZILIZOPO	13	13	6	5
IDADI YA VIKUNDIKAZI HAI				42
IDADI YA VIBARUA	54	54	54	54
GHARAMA YA KUWALIPA VIBARUA	62,635,680 TShs.	62,635,680 TShs.	62,635,680 TShs.	62,635,680 TShs.
WADAU WA TAKA NGUMU			❖ Swisscontact ❖ Sokoine University of Agriculture (SUA)	❖ Swisscontact ❖ Sokoine University of Agriculture (SUA)

NB.

- ✓ Idadi iliyotajwa kwenye magari inajumuisha magari yote mazima na mabovu.
- ✓ Mwak 2012 gari namba SM 145 liliuzwa na gari namba SM 9895 lilianza kufanya kazi na hivyo kuwa na magari 6 mwaka 2012 na magari 5 miaka iliyoendelea.